National Aeronautics and Space Administration

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Fiscal Year 2003 NASA - Wide Facilities Condition Assessment and Deferred Maintenance Estimate

NASW - 02010 Task Order 05

Facilities Engineering Division

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EXECUTIVE SUMMARY

The purpose of this report is to provide an assessment of the general condition of all National Aeronautics and Space Administration (NASA) facilities and an estimate of deferred maintenance (DM) cost using NASA's deferred maintenance parametric estimating method. The method is designed to provide consistent, auditable deferred maintenance estimates at the Agency and Center levels, and to provide an assessment of the general condition of NASA facilities at the system level. Its intended use is as a facility performance metric which can be compared to, and trended against, other commonly used facility metrics. As assessments are repeated, trends will develop that will prove useful in evaluating the overall effectiveness of the facility maintenance programs within NASA.

This is the second facilities assessment and deferred maintenance study completed for NASA using the DM parametric estimating method as outlined in NASA's *Deferred Maintenance Guidebook version 2*. In FY02, NASA first used the method for assessing the condition of their facilities and for estimating the deferred maintenance cost of the facilities. The method was used by the NASA Facility Engineering Office (Code JX) and the NASA Budget Office (Code B) as the basis for the Annual Accountability Report and as an investment and budgeting tool. It provides NASA with a unique capability to analyze the condition of its facilities and the cost to renew them.

The DM estimate for the Agency increased from $2.03 billion in the FY02 assessment to $2.27 billion in the FY03 assessment, an increase of 12%.[1] This indicates the Agency DM estimate is outgrowing inflation by about 10% annually. The Agency facility condition index (FCI) remained the same as the FY02 assessment of 3.6. The DM estimate for Agency active sites increased from $1.64 billion to $1.78 billion or 8%, with the FCI of active sites remaining at 3.7.[2] The DM estimate of inactive sites increased from $0.39 billion to $0.49 billion or 26%, with the FCI of inactive sites decreasing 0.2 to 3.2. Some of the drop in DM and FCI for inactive sites is due to a better accounting of inactive facilities and the estimation of CRVs for those facilities in the database without CRVs.[3] The Resarch and Development (R&D) facilities' FCI remained constant at 3.7 but the mission operations facilities' FCI increased to 3.9. These numbers indicate that the Agency's facilities are in good to fair condition with the critical facilities generally in better condition than the other facilities. However, considering difference between a rating of 4 (*normally* function as intended) and a rating of 3 (*occasionally are unable to function as intended*); these ratings are too low for these facilities, because the potential exists that missions and programs may be impacted by the facility condition. To remedy this NASA should develop a prioritized list of *critical* R&D and operational facilities to help prioritize maintenance funding. This is a complex issue because critical facilities vary from Center to Center in accordance with the Center's mission(s).

The only notable changes in the system condition index (SCI) values were in the electrical and the heating, ventilating, and air conditioning (HVAC) systems, in which the DM estimate

[1] All CRV numbers include the FY03 Engineer News Record (ENR) inflation factor of a 1.85% increase.
[2] In the FY02 report the method of calculating active, inactive and SCI was different as discussed earlier. For the purposes of this comparison, the FY02 data was recalculated using this year's weighted method.
[3] These may be facilities under construction that have a place holder in the RPI but not a complete record, or facilities under $5000 that were assessed but are not in the RPI and have no recorded CRV.

increased $0.06 billion and $0.13 billion, respectively. This is due to the consistent application of age related depreciation of ratings within the assessment process.[4] However, the DM estimate for the electrical system continues to be twice the DM estimate amount of the next highest system, structure. Although the Centers are working to upgrade both their electrical and HVAC systems, many of these systems' ages still make them susceptible to a critical or massive failure that will affect R&D programs and operational events, or will create a major safety event. The agency should consider making the electrical system and the facility categories that support it (distribution, generation, and substations/transformers) its highest maintenance priority, and should centralize some of the funding for the maintenance of the electrical system and some of its most critical facilities. NASA should also consider tracking its maintenance dollars by the nine assessed systems. To further address this critical issue the Agency should seek special funding for the renewal of the electrical systems within NASA.

NASA has 34 facilities with a CRV over $100 million. They equal 28% of the NASA CRV, and account for 44% of NASA's FY03 deferred maintenance estimate. In facilities or systems or where an individual facility is a large percentage of a site's CRV, (i.e. Kennedy's Vehicle Assembly Building, Ames' wind tunnel, Stennis' static test stands) a single rating change can change the DM estimate or the FCI for an the entire site. For example, the VAB CRV ($883 million) is 18% of the Kennedy CRV. When the VAB is removed from the Kennedy data, Kennedy's FCI increases from 3.3 to 3.4 and the DM estimate decreases from $850 million to $ 240 million.

The FCI of the Agency facilities has remained constant since the FY02 report as one would expect in only one year. However, there is evidence of a substantial maintenance effort at some sites that have made a dramatic improvement on the facility condition.[5] The condition of the facilities may be have an impact on the success of operations and research without improvement. NASA should take steps to prioritize the maintenance on these facilities including: performing a critical infrastructure review, seek special Congressional funding to address specific problem areas, centralizing some maintenance funding, and seek relief from the cost of maintaining some of its $1.9 billion worth of inactive facilities (DM value $.49 billion) through an active demolition program or other methods of disposal.

[4] The electrical systems were the lowest assessed system with an SCI of 3.3, and they had the highest DM cost estimate at $800 million. The DM facility category "Power generation/power plants" (59 facilities, CRV of $81.7 million) reflects this as assessed at 2.7 with a DM cost estimate at $5.5 million.

[5] For example at Canberra, work on the exterior of the antennas has raised the FCI from 3.9 to 4.3 and reduced the deferred maintenance cost from $10.10M to $4.6M

The following tables provide summary data on the DM cost, FCI and SCI by Center (all numbers include all sites), Enterprise, and Agency FY03 CRV values. Table 0-1 provides the SCI for Centers (all sites), Enterprise, and Agency. Table 0-2 shows the DM cost per system by Center (all sites), Enterprise, and Agency. Table 0-3 provides a summary of the data. Table 0-4 provides a comparison between the FY02 and FY03 assessments.

Table 0-1. System Condition Index

Line Name	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Conveyance	Program Support Equipment
Ames Research Center Total	3.8	3.5	3.9	3.9	3.3	3.6	3.7	4.4	3.8
Dryden Flight Research Center Total	4.4	4.1	4.4	4.2	3.9	4.3	4.4	4.3	4.6
Glenn Research Center Total	3.7	3.7	3.7	3.6	3.3	3.4	3.5	3.6	4.0
Langley Research Center	4.0	3.9	3.8	3.7	3.2	3.5	3.5	4.0	3.8
Code R (Aerospace Research)	**3.8**	**3.7**	**3.8**	**3.7**	**3.3**	**3.6**	**3.6**	**4.0**	**3.8**
Goddard Space Flight Center Total	4.0	4.0	4.1	4.1	4.2	4.0	3.8	4.4	4.6
Code Y (Earth Science)	**4.0**	**4.0**	**4.1**	**4.1**	**4.2**	**4.0**	**3.8**	**4.4**	**4.6**
Jet Propulsion Laboratory Total	4.0	3.9	4.1	4.1	3.7	4.0	4.0	4.2	4.3
Code S (Astrobiology & Space Research / Science)	**4.0**	**3.9**	**4.1**	**4.1**	**3.7**	**4.0**	**4.0**	**4.2**	**4.3**
Johnson Space Center Total	3.8	3.5	3.9	3.9	3.4	3.2	3.4	3.3	3.6
Kennedy Space Center Total	3.8	2.9	3.4	3.3	2.7	2.7	3.3	3.6	3.5
Marshall Space Center Total	3.8	3.8	3.5	3.6	3.5	3.3	3.6	4.0	4.1
Stennis Space Center Total	3.6	3.7	3.6	3.7	3.3	3.6	3.2	3.0	3.5
Code M (Human Exploration & Development)	**3.8**	**3.3**	**3.6**	**3.6**	**3.1**	**3.1**	**3.4**	**3.4**	**3.7**
NASA TOTAL	**3.8**	**3.5**	**3.7**	**3.7**	**3.3**	**3.4**	**3.5**	**3.8**	**3.8**

Table 0-1. System DM Estimate ($B)

Line Name	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Conveyance	Program Support Equipment
Ames Research Center Total	$0.07	$0.03	$0.01	$0.01	$0.11	$0.02	$0.01	$0.00	$0.06
Dryden Flight Research Center Total	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Glenn Research Center Total	$0.11	$0.02	$0.02	$0.02	$0.07	$0.04	$0.01	$0.00	$0.01
Langley Research Center	$0.01	$0.01	$0.01	$0.01	$0.06	$0.02	$0.01	$0.00	$0.02
Code R (Aerospace Research)	**$0.19**	**$0.05**	**$0.04**	**$0.04**	**$0.24**	**$0.07**	**$0.03**	**$0.00**	**$0.09**
Goddard Space Flight Center Total	$0.03	$0.01	$0.01	$0.01	$0.02	$0.01	$0.01	$0.00	$0.00
Code Y (Earth Science)	**$0.03**	**$0.01**	**$0.01**	**$0.01**	**$0.02**	**$0.01**	**$0.01**	**$0.00**	**$0.00**
Jet Propulsion Laboratory Total	$0.03	$0.01	$0.01	$0.00	$0.02	$0.01	$0.00	$0.00	$0.00
Code S (Astrobiology & Space Research / Science)	**$0.03**	**$0.01**	**$0.01**	**$0.00**	**$0.02**	**$0.01**	**$0.00**	**$0.00**	**$0.00**
Johnson Space Center Total	$0.03	$0.02	$0.00	$0.01	$0.03	$0.03	$0.01	$0.00	$0.00
Kennedy Space Center Total	$0.08	$0.10	$0.04	$0.03	$0.40	$0.17	$0.03	$0.00	$0.00
Marshall Space Center Total	$0.04	$0.02	$0.03	$0.01	$0.08	$0.04	$0.01	$0.00	$0.00
Stennis Space Center Total	$0.04	$0.01	$0.01	$0.00	$0.03	$0.01	$0.01	$0.00	$0.01
Code M (Human Exploration & Development)	**$0.20**	**$0.14**	**$0.08**	**$0.05**	**$0.54**	**$0.25**	**$0.05**	**$0.01**	**$0.02**
NASA TOTAL	**$0.45**	**$0.21**	**$0.14**	**$0.10**	**$0.81**	**$0.34**	**$0.09**	**$0.02**	**$0.11**

Table 0-3. FY03 Summary Table ($B)

Line Name	FY03 CRV Total	FY02 BMAR Total	FY03 DM Total	FCI	Active CRV	Active DM	Active FCI	Inactive CRV	Inactive DM	Inactive FCI
Ames Research Center Total	$3.55	$.07	$0.30	3.7	$2.55	$0.14	3.8	$1.00	$0.16	3.4
Dryden Flight Research Center Total	$0.33	$.01	$0.01	4.2	$0.33	$0.01	4.2	$0.00	$0.00	3.7
Glenn Research Center Total	$2.51	$.07	$0.29	3.6	$2.27	$0.14	3.7	$0.24	$0.16	2.3
Langley Research Center	$2.62	$.03	$0.15	3.7	$2.40	$0.12	3.7	$0.22	$0.03	3.2
Code R (Aerospace Research)	**$9.01**	**$.18**	**$0.76**	**3.7**	**$7.55**	**$0.41**	**3.8**	**$1.45**	**$0.34**	**3.2**
Goddard Space Flight Center Total	$1.82	$.04	$0.09	4.1	$1.77	$0.06	4.1	$0.05	$0.03	2.5
Code Y (Earth Science)	**$1.82**	**$.10**	**$0.09**	**4.1**	**$1.77**	**$0.06**	**4.1**	**$0.05**	**$0.03**	**2.5**
Jet Propulsion Laboratory Total	$1.26	$.03	$0.09	4.0	$1.21	$0.05	4.0	$0.05	$0.03	2.7
Code S (Astrobiology & Space Research / Science)	**$1.26**	**$.03**	**$0.09**	**4.0**	**$1.21**	**$0.05**	**4.0**	**$0.05**	**$0.03**	**2.7**
Johnson Space Center Total	$1.84	$.20	$0.14	3.6	$1.84	$0.14	3.6	$0.00	$0.00	2.4
Kennedy Space Center Total	$4.70	$.20	$0.85	3.3	$4.65	$0.84	3.3	$0.05	$0.01	3.4
Marshall Space Center Total	$2.51	$.20	$0.23	3.6	$2.24	$0.18	3.7	$0.27	$0.05	3.1
Stennis Space Center Total	$1.62	$.08	$0.12	3.5	$1.58	$0.10	3.6	$0.04	$0.01	3.2
Code M (Human Exploration & Development)	**$10.67**	**$.70**	**$1.34**	**3.5**	**$10.31**	**$1.26**	**3.5**	**$0.36**	**$0.08**	**3.1**
NASA TOTAL	**$22.75**	**$1.00**	**$2.27**	**3.6**	**$20.84**	**$1.78**	**3.7**	**$1.91**	**$0.49**	**3.2**

Table 0-4.FY02& FY03 Comparison

Line Name	FY02 DM ($M)	FY03 DM($M)	Delta DM ($M)	% Change	FY02 FCI	FY03 FCI	Delta FCI
Ames Research Center Total	$230.05	$303.07	$73.02	31.74%	3.8	3.7	-0.1
Dryden Flight Research Center Total	$8.32	$7.42	-$0.90	-10.78%	4.1	4.2	0.1
Glenn Research Center Total	$270.62	$292.12	$21.50	7.94%	3.6	3.6	0.0
Langley Research Center Total	$288.14	$153.17	-$134.97	-46.84%	3.7	3.7	0.0
Code R (Aerospace Research)	**$797.12**	**$755.78**	**-$41.34**	**-5.19%**	**3.7**	**3.7**	**0.0**
Goddard Space Flight Center Total	$95.06	$91.29	-$3.77	-3.97%	3.9	4.1	0.2
Code Y (Earth Science)	**$95.06**	**$91.29**	**-$3.77**	**-3.97%**	**3.9**	**4.1**	**0.2**
Jet Propulsion Laboratory Total	$51.03	$86.35	$35.32	69.21%	4.1	4.0	-0.1
Code S (Astrobiology and Space Research/ Science)	**$51.03**	**$86.35**	**$35.32**	**69.21%**	**4.1**	**4.0**	**-0.1**
Johnson Space Center Total	$120.85	$136.33	$15.48	12.81%	3.5	3.6	0.1
Kennedy Space Center Total	$506.50	$850.13	$343.63	67.84%	3.3	3.3	0.0
Marshall Space Flight Center Total	$173.74	$233.50	$59.76	34.40%	3.9	3.6	-0.3
Stennis Space Center Total	$281.92	$115.08	-$166.84	-59.18%	3.1	3.5	0.4
Code M (Human Exploration and Development of Space)	**$1,083.02**	**$1,335.03**	**$252.01**	**23.27%**	**3.5**	**3.5**	**0.0**
NASA Total	**$2,026.23**	**$2,268.44**	**$242.21**	**11.95%**	**3.6**	**3.6**	**0.0**

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ACRONYMS

ADA	Americans with Disabilities Act
ARC	Ames Research Center
ASTM	American Society for Testing of Materials
ATK	Alliant Techsystems (Brigham City, Utah)
BMAR	Backlog of Maintenance and Repair
CAS	Condition Assessment System
CDSCC	Canberra Deep Space Communications Complex
CER	Cost Estimating Relationships
COD	Center Operations Directorate
CRV	Current Replacement Value
DFRC	Dryden Flight Research Center
DM	Deferred Maintenance
DoD	Department of Defense
DOE	Department of Energy
DSN	Deep Space Network
ENR	Engineering News Record
FASAB	Federal Accounting Standards Advisory Board
FCI	Facility Condition Index
FFC	Federal Facilities Council
FIS	Facility Investment Study
FSM	Facility Sustainment Model
FY	Fiscal Year
GRC	Glenn Research Center
GSFC	Goddard Space Flight Center
HSTDN	Hawaii Space Flight Tracking and Data Network
HVAC	Heating, Ventilation, and Air Conditioning Systems
JPL	Jet Propulsion Laboratory
JSC	Johnson Space Center
JX	NASA Headquarters Facilities Engineering Division
KPGO	Kokee Park Geophysical Observatory
KSC	Kennedy Space Center
LaRC	Langley Research Center
MAF	Michoud Assembly Facility
MFA	Moffet Federal Airfield
MDSCC	Madrid Deep Space Communications Complex
MSFC	Marshall Space Flight Center
NASA	National Aeronautics and Space Administration
NPG	NASA Policy Guide
NSBF	National Scientific Balloon Facility
O&M	Operations and Maintenance
OSF	Office of Space Flight
PACES	Parametric Cost Estimating System
PBS	Plum Brook Station

PDA	Personal Digital Assistant
PFR	Poker Flats Research Range
PM	Preventive Maintenance
POC	Point of Contact
PP&E	Plant, Property and Equipment
PSTDN	Ponce De Leon Space Flight Tracking and Data Network
R&D	Research and Development
RPI	Real Property Inventory
SCI	System Condition Index
SCTF	Sonny Carter Training Facility
SOW	Statement of Work
SSC	Stennis Space Center
SSFL	Santa Susanna Field Laboratory
STDN	Space Flight Tracking and Data Network
TDRSS	Tracking and Data Relay Satellite System
UM	Unit of Measure
USACE	U.S. Army Corps of Engineers
VAB	Vehicle Assembly Building
WWF	Wallops Flight Facility
WSTF	White Sands Testing Facility

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1.0 FISCAL YEAR 2003 NASA–WIDE STANDARDIZED FACILITIES ASSESSMENT

1.1 Purpose

This report provides the results of the 2003 National Aeronautics and Space Administration (NASA) facilities condition assessment and deferred maintenance cost estimate using the NASA DM parametric estimating method. The DM method enables a rapid, low-cost, consistent assessment of the condition of NASA's facilities worldwide. It is designed for application to a large population of facilities.

The facility assessment results provide a facilities condition assessment that satisfies the Federal Accounting Standards Advisory Board (FASAB) Standard #6.[6] The assessment results satisfy NASA's requirement to report on facilities condition in the Agency's Annual Accountability Report. The Facilities Engineering Division, Headquarters Enterprises, and the Comptroller can utilize the deferred maintenance cost estimate to provide a useful metric of facilities requirements during the budget evaluation process.

1.2 Background

The FASAB requires federal agencies to report on facilities condition and the estimated cost to remedy deferred maintenance of plant, property, and equipment (PP&E) in their Annual Accountability Reports. To meet this requirement NASA Policy Guide (NPG) 8831.2D*, Facilities Maintenance Management*, requires periodic condition assessments of Center facilities by completing a 100% inspection or by routine inspections scheduled throughout the prescribed 5-year cycle. Centers previously reported the results of these condition assessments as the backlog of maintenance and repair (BMAR). NPG 8831.2D defines BMAR as:

> *"The NASA unfunded facilities maintenance required to bring facilities and collateral equipment to a condition that meets acceptable facilities maintenance standards."*

Within NASA, BMAR estimates had historically been used as a vehicle to support the Agency's Annual Accountability Report, providing both a functional performance metric trended over time and a reference point when reviewing annual maintenance budgets.

In 1997, NASA developed an Agency-wide deferred maintenance estimate, the Facility Investment Study (FIS). The FIS estimated both BMAR and alteration requirements. From 1997 through 2001, the FIS has been updated to form the basis for the Agency's facilities condition estimate referenced in the Annual Accountability Reports. Auditors of the FY01 Accountability Report indicated that a new, more consistent method for estimating deferred maintenance was required for the FY02 Accountability Report.

[6] Federal Accounting Standards Advisory Board. *Deferred Maintenance Reporting For Federal Facilities, Meeting the Requirements of Federal Accounting Standards Advisory Board Standard Number 6, as Amended, Accounting for Property, Plant and Equipment (PP&E),* June 1996. GPO #041-001-00462-9.

Due to a broad intestest in FASAB standard #6, the Federal Facilities Council (FFC) Standing Committee on Operations and Maintenance initiated a study to identify issues related to the reporting of DM for facilities entitled, *Deferred Maintenance Reporting for Federal Facilities: Meeting the Requirements of Federal Accounting Standards Advisory Board Standard Number 6, as Amended*. The study reviewed alternative options, including parametric estimations, for developing credible, consistent, auditable, and cost effective DM estimates. The FFC report can be viewed online at *http://books.nap.edu/catalog/10095.html*.

Concurrently with the FFC study, NASA leadership supported a parametric cost estimating system as a cost-effective and credible alternative for estimating DM. Parametric cost estimating is an accepted technique used by contractors and the government in planning, budgeting, and performance stages of the acquisition process. The technique expedites the development of cost estimates and is appropriate when discrete estimating techniques would require inordinate amounts of time and resources, without leading to significant improvements in estimate accuracy or probability of obtaining additional resources.

The DM facilities condition assessment involves an independent rapid visual assessment of nine different systems within each facility.[7] Independent assessment teams rely upon input from local facilities management staff during the assessment. Systems are rated from 5 (normal maintenance required) to 1 (system does not function). These condition ratings are entered into a parametric estimating model that uses the current replacement value (CRV) as its basis. The CRV is apportioned among each of the nine facility systems. There are different System CRV Percentage models for each of 42 separate DM facility categories. The DM model produces a system condition index (SCI), a facilities condition index (FCI), and a deferred maintenance cost estimate (DM cost).

In FY02 NASA first used the DM method for assessing the condition of its facilities and for estimating the deferred maintenance cost on their facilities. The method was used by NASA Facility Engineering Office (Code JX) and the NASA Budget Office (Code B) as the basis for the Annual Accountability Report and as a budgeting tool. The results of last year's report follow:

- The Agency FCI was 3.6 (on a scale from 5 (excellent) to 1 (bad).
- NASA's scientific (R&D type) facilities had an FCI of 3.7
- Operations facilities (mission and communications) had an FCI of 3.8
- The FCI of inactive facilities including remote and low value sites was 2.5
- The Agency-wide 2002 DM estimate was approximately $2.0 billion, which was 10% of NASA's $21 billion CRV
- The DM estimate for active sites was about $1.6 billion and the DM estimate on inactive facilities was approximately $0.4 billion

[7] Structure, Roof, Exterior, Interior Finishes, Heating/Ventilating/Air Conditioning (HVAC), Electrical Systems, Plumbing Systems, Conveyance Systems, Program Support Equipment

2.0 FISCAL YEAR 2003 NASA–WIDE FACILITIES CONDITION ASSESSMENT AND DEFERRED MAINTENANCE COST ESTIMATE

2.1 The Assessment

To complete the assessments at all 34 sites by the target date of September 1, 2003, 20 engineers and technicians were assigned to conduct the site visits. In total, the assessment teams evaluated the condition of 5,806 facilities through on-site visits and 61 facilities remotely. The Downey, California, facility was not assessed since it is in the process of being turned over to the city. Appendix B provides a list of low value, remote sites that were assessed using techniques described in the *DM Guidebook* but not visited. These sites, except Bermuda, Gambia and Morocco, have minimal facilities that usually consist of a very small, "temporary" facility (or trailer) and a concrete pad. Bermuda, Gambia, and Morocco have a variety of larger permanent buildings.

Site visits were conducted using two-person teams. The number of teams was sized to complete each site assessment within one week. Assessment data were collected on handheld personal digital assistants (PDA) e.g., PalmPilots® and Windows® CE-based handheld computers. In some cases paper records were used as a backup in some cases. NASA facility staff, security staff and supporting contractors provided outstanding support and contributed to the successful completion of the assessments.

DM assessments do not include costs associated with environmental contamination/remediation, such as asbestos removal, lead paint removal, Americans with Disabilities Act (ADA) considerations, or changed safety regulations and codes.

2.2 Quality Assurance (SOW para. 6f)

Prior to the assessment, one concern regarding application of the DM method was to control the consistency of assessments among the various team members. In an attempt to ensure consistency a training session was held at two locations; one at Cocoa Beach, Florida, and one in Alexandria, Virginia. All assessors attended a training session. The training provided a review of the statement of work (SOW), and a detailed brief on the Deferred Maintenance Guidebook with a special emphasis on changes from last years assessment.

To further ensure that assessments were consistent between years, team leaders were required to validate the FY03 results against the FY02 results at the end of each day. If the ratings difference for a particular system within a facility was more than 1, the team leader was to try to validate the change in the condition of the system.

Appendix C demonstrates a third quality control method that occurred with a check in the database using charts that compared the FY03 assessment to the FY02 assessment. These charts compared each rating between the years and highlighted those that with a ratings change where the change was greater than 1 enabling us to ask again why the ratings differed.

The final check for consistency showed that the FY03 ratings were 78% the same as the FY02 ratings, with the largest difference being at Langley (24%) where changes were made as a result of guidance changes in the assessment (see section 4.)

2.3 Proposed Method to Identify the Database for Each Assessment Year (SOW para. 6g)

The NASA Deferred Maintenance program/project has entered the second year. The assessment data gathered for FY03 must be distinguished from the FY02 assessment data. There are two basic methods to accomplish this. The first method is to create a separate data table in Microsoft Access for each FY. The second method is to add a column/field to the ASSESSMENT table in the DM database that indicates the fiscal year to which the associated record belongs. The following paragraphs discuss the advantages and disadvantages of these methods.

2.3.1 Separate Data Tables

Probably the more straight forward method to distinguish data of one FY from data of others is to create a separate data table for each FY the DM assessment is conducted. The name of the table would indicate to which FY the data belongs. The advantage to this approach is that when working with queries it is not as easy to accidentally corrupt or overwrite the data of any particular FY since the data is in the separate table. There are also a few disadvantages. First, separate data tables make comparison of assessment data from one FY to the next more difficult since the records are in two different tables. Second, creating reports, queries, and other automated methods of working with the data are much more complex since the query must deal with two different objects. Third, since the data from each FY is in a separate table, each comparison between two years would require a separate query to be created. This means that each time data is gathered, the database structure must be changed and new objects created instead of just appending the data to an existing table. The end result is that maintaining a database with separate tables for each FY assessment would require more labor.

2.3.2 Field to Indicate FY

A second approach to distinguish data of one FY from data of others is to add a field to the ASSESSMENT table to indicate the FY of the data. The advantages of this method follow. First, comparisons of data from one FY to the next are relatively easy since all the data resides in one table. The query/report only has to work with one object/table. Second, one query can be created that can compare any two years data merely by specifying the year. Third, since all assessment data resides in the same table, the database structure does not necessarily have to change with each assessment. The disadvantage of this approach is that since all the data is in one table, it is easier to accidentally corrupt or overwrite data since the process of importing data from a new FY works only with that one table. This could happen merely by forgetting to specify which FY to update when creating the query to do the import. Using this approach the database will require less labor to maintain than one where each FY has a separate table.

Plexus has opted for the second option, using a field to indicate the FY of a data record in the ASSESSMENT table. The primary drivers for this decision are:

- Creation of queries to work with the data only has to specify one assessment data table vice multiple tables.

- By creating a query where the FY is an input as opposed to another table, one query can be created in such a way that it can work with the data from any two or more years without having to modify the actual query.
- The database structure does not have to change by adding an additional table each time an assessment is conducted.

2.4 Database improvements and additional utilities

2.4.1 The Addition of Forms

During the FY02 assessment Plexus used a database to account for and store a large amount of DM data. However, the analysis of the FY02 data was accomplished and delivered to the client in a spreadsheet. This proved to be very difficult, requiring the analyst to understand the data and the status of the data in two different tools. It was determined, therefore, that in order to perform an FY03 assessment effectively, more of the analysis previously done in the spreadsheet would have to be accomplished in the database. For this reason, the assessment data was merged and parsed between both the spreadsheet and the database and the FY02 DM database was provided as a data tool to the NASA JX

To do the analysis within the database we had to first investigate the capabilities of the database. Key to the investigation was leveraging the ability to 'dynamically' look into the data in different ways. Usually this is done with a query. Queries are used to view, change, and analyze data in different ways. However, to attain useful data through queries the user(s) (i.e., managers, assessors, and NASA JX) needs to be familiar with the query language that is designed to be machine (executable) friendly. This analysis process was very time consuming and inefficient. Accordingly, a way was sought to eliminate these inefficiencies. The search led to another database tool, or layer, called a form. Forms have the capability to use queries and controls to manipulate and display data in user-defined formats. Thus, the FY03 DM task includes and utilizes numerous forms and query based tools to facilitate efficient and effective analysis of the data obtained in the FY2003 DM Assessment.

An important form within the database that was created to aid in data analysis is called the "Analyst Criteria Selection." This form allows a user of the database to 'dynamically' select criteria to display information formatted for the computer screen or printer. The available selection criteria are: year, hierarchy, ratings, dates, CRV, and FCI. Two of these variables (CRV and FCI) allow the user to define limits on their search. The selection criteria defined by the user is compiled and executes a query. The results of their selection appear on the computer screen, without the user having to have written a query.

Each of the available selection criteria may be individually selected and/or by subsets based on the inquiry the user is investigating. The two dynamic selection criteria choices allow the user to further limit their search (i.e., an FCI between 3.8 and 4.2, or a buildings CRV $0 and $50K). In each case the output is returned based on the user-selected variables on the Analyst Criteria Selection form. The user runs the search after defining the search criteria by pressing the "Find Matches" button on the bottom of the form. The hierarchy section in the form conforms with NASA JX hierarchy of facilities agreed upon under this contract. Selecting the "Cancel" button

closes the "Analyst Criteria Selection" form without running the defined query. The form can be cleared for a new selection by changing the selection in the date field.

The use of the "Analyst Criteria Selection" form provides a much more user friendly interface into the data, and allows for effective merging of data, performing quality analysis and assurance of the data, and in compiling the overall analysis of the FY03 data.

2.4.2 The Heuristic Model for Calculating the Deferred Maintenance Cost to Incrementally Increase Facility Conditions.

In the spring of 2003 Plexus Scientific was tasked (task 04) to develop an approach that calculated an incremental change in deferred maintenance cost based on an incremental change in a facilities condition. NASA management used this method during the FY03 planning, programming and budgeting cycle to estimate the maintenance cost required to improve a group of facilities' condition to a more acceptable condition.

The task specifically asked for the estimate of maintenance dollars required to raise the weighted Facility Condition Index (FCI) of subsets of NASA facilities to various target FCIs in increments of one tenth. The following table illustrates this new functionality:

Table 2-1. Dollars (M) Required to Raise Facility Condition

NAME	2002 CRV	Calc DM	FCI	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0
Ames Research Center	$2,373	$109	4.1											$0	$12	$24	$36	$48	$60	$72	$84	$97	$109
Crows Landing	$88	$12	2.9	$7	$4	$5	$6	$7	$7	$8	$9	$10	$11	$11	$11	$12	$12	$12	$12	$12	$12	$12	$12
Camp Parks	$5	$1	3.5					$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1	$1	$1	$1
Moffet Federal Airfield	$1,152	$109	3.3			$0	$13	$25	$38	$51	$64	$76	$89	$91	$93	$95	$97	$99	$101	$103	$105	$107	$109
Ames Research Center Total	**$3,619**	**$230**	**3.8**								**$0**	**$64**	**$128**	**$138**	**$148**	**$158**	**$169**	**$179**	**$189**	**$199**	**$210**	**$220**	**$230**
Dryden Flight Research Center	$264	$8	4.1											$0	$1	$2	$3	$4	$5	$6	$6	$7	$8
Dryden Flight Research Center Total	**$264**	**$8**	**4.1**											**$0**	**$1**	**$2**	**$3**	**$4**	**$5**	**$6**	**$6**	**$7**	**$8**
Glenn Research Center	$1,751	$122	3.7							$0	$26	$53	$79	$84	$88	$92	$96	$101	$105	$109	$114	$118	$122
Plum Brook Station	$711	$149	3.3			$0	$17	$35	$52	$69	$87	$104	$121	$124	$127	$130	$132	$135	$138	$141	$143	$146	$149
Glenn Research Center Total	**$2,462**	**$271**	**3.6**						**$0**	**$48**	**$97**	**$145**	**$193**	**$201**	**$209**	**$217**	**$224**	**$232**	**$240**	**$248**	**$256**	**$263**	**$271**
Langley Research Center	$2,567	$288	3.7							$0	$62	$124	$186	$196	$207	$217	$227	$237	$247	$258	$268	$278	$288
Langley Research Center Total	**$2,567**	**$288**	**3.7**							**$0**	**$62**	**$124**	**$186**	**$196**	**$207**	**$217**	**$227**	**$237**	**$247**	**$258**	**$268**	**$278**	**$288**
Code R (Aerospace Technology) Total	**$8,911**	**$798**	**3.7**							**$0**	**$173**	**$345**	**$518**	**$546**	**$574**	**$602**	**$630**	**$658**	**$686**	**$714**	**$742**	**$770**	**$798**

The model produced a change in the estimated DM cost as the condition of a group of facilities increased incrementally. The change in cost is accurate within the precision of the DM parametric cost estimate method developed by NASA for the FY02 Agency Accountability Report. In this regard it is important to remember that the model is intended for use over large populations of facilities; the fewer facilities in a group, the less accurate the results.

This facilities management tool was useful in helping NASA management during the planning, programming and budgeting cycle to estimate the maintenance cost required to increase a group of facilities' condition to a more acceptable condition. It can also aid in the prioritization of maintenance spending among Enterprises, Centers, sites, types of facilities and even facilities systems.

Although the model, as used, was a useful approximation for the level of detail that NASA required in the budgeting process, there is a better method to determine the cost in increasing the

conditions of NASA facilities. A better approach to the solution is to use a heuristic model. Using a heuristic model changes fewer of the assessed values – thus retaining a higher percentage of accurate (assessed) data. In a heuristic model, a series of descriptive rules within the database guide the queries to pick and choose which assessed values to change in order to achieve the target weighted FCI for the assigned subset. This approach was not used in the original task because of its complexity and the need to have a feasible solution quickly. However, a heuristic model was developed during a subsequent task and is now included in the database.

2.4.3 Change in Database Structure (SOW para. 6i, j)

There were several changes in the database structure to facilitate the many new capabilities of the database and to meet some of the requirements of the statement of work. New tables were added such as: an assessment table, which is used to keep each year's assessment data separate; a program table, which enables one to sort facilities by programs such as Shuttle;[8] and a more detailed hierarchy was developed including the enterprises and all sites to enable the database queries to sort and display like RPI database. For example, in the FY02 report, the low value and remote sites associated with GSFC (the STDNs, VBLIs, BRTs, and MOBLAS sites) were all combined as one group, and given one DM cost estimate and one FCI. This year each site was given its own DM cost estimate and FCI. This made no change in the assessment values but does provide greater detail for the facilities and program managers. Brooks and Downey are included under JSC. The Goldstone hierarchy was also changed, similarly. Although it is only one line in the summary tables, within the database, the Goldstone hierarchy has been expanded to include its sub sites in accordance with the RPI. These are just a few examples of the changes in the database structure. Appendix J gives a detailed explanation of the structure and the queries.

2.4.4 New Method to Calculate Active/Inactive/SCI.

As explained in section 1.3.2 in the FY02 report, active sites, inactive sites, and SCI were calculated using simple averages of the facilities concerned. Although this was a different calculation than the way FCIs are calculated, at the time we did not have a better way to calculate them, and the simple average was sufficient to make reasonable comparisons and to draw reasonable conclusions. In the process of doing several projects since the FY02 report, we were able to develop a calculation to weight the active sites, inactive sites and SCIs.

As shown in Table 2-2, SCI is calculated by first determining the CRV of the system in question by multiplying the facility CRV by the % system CRV. The value of these system CRVs are then totaled. Next, the system CRV for each facility is normalized or weighted by dividing the system CRV by the sum of all the system CRVs. This quotient is then multiplied by its respective assessment rating. These "weighted" SCI are then added together to determine the facilities SCI. The active and inactive sites use the same methodology, using facilities at sites instead of systems.

[8] The table is currently only populated with data on shuttle related facilities because that is the only data NASA currently has available.

			STRUC				
Facility Description	**PRV ($M)**	**DM Cat.**	**Insp Rate**	**% Sys CRV**	**Value of System**	**Normalization to value of systems**	**SCI**
MATERIAL/EQUIPMENT STORAGE	$52,593	28	2	0.63	$33,133.59	0.000528284	0.001056568
WAREHOUSE	$1,172,019	7	4	0.4	$468,807.60	0.007474695	0.02989878
COVERED STORAGE	$102,267	9	5	0.63	$64,428.21	0.001027247	0.005136235
MAINTENANCE EQUIPMENT STORAGE SHED	$93,401	28	5	0.63	$58,842.63	0.00093819	0.004690951
FEMA EQUIPMENT STORAGE SHED	$92,789	28	5	0.48	$44,538.72	0.000710128	0.003550639
GENERAL WAREHOUSE	$7,781,631	8	4	0.6	$4,668,978.60	0.074442461	0.297769842
ADMINISTRATION BUILDING	$12,166,903	5	5	0.19	$2,311,711.57	0.036858061	0.184290304
AUDITORIUM	$6,306,944	5	3	0.22	$1,387,527.68	0.02212282	0.066368461
MAIN LIBRARY	$5,716,090	5	5	0.19	$1,086,057.10	0.017316156	0.086580781
COMPUTATIONAL FLUID DYNAMICS BUILDING	$1,450,139	1	4	0.18	$261,025.02	0.004161798	0.016647191
PHOTOTECHNOLOGY LAB.	$10,960,633	1	4	0.18	$1,972,913.94	0.031456252	0.125825009
NACA MONUMENT & TIME CAPSULE	$13,923	25	5	0.9	$12,530.70	0.00019979	0.000998951
ADMINISTRATIVE SUPP.BLDG.	$17,241,384	5	4	0.19	$3,275,862.96	0.052230545	0.208922182
SPACE TECHNOLOGY BUILDING	$775,998	1	4	0.19	$147,439.62	0.002350786	0.009403143
PILOT MODEL OF 3.5 FT HWT	$322,353	3	5	0.76	$244,988.28	0.003906107	0.019530535
12 FT PRESSURE WIND TUN.	$155,601,694	3	5	0.3	$46,680,508.20	0.74427668	3.721383398
	$219,850,761				$62,719,294.42		**4.8**

Table 2-2. Example SCI calculations using "structure"

2.5 Real Property Inventory Issues (SOW para. 6i,j,k)

Having accurate and complete real property related information in the DM database is critical to developing parametric estimates of NASA's facilities deferred maintenance costs. Accordingly, one of the first steps accomplished in this year's DM assessment was to ensure that the information in the DM database was correct. Although the NASA Real Property Inventory (RPI) was initially utilized to create the database for the FY02 assessment, this data has been screened and corrected by two successive DM assessments, both of which included a detailed review of the RPI records, to insure that the data was suitable for the purposes of parametrically estimating both deferred maintenance and sustainment costs. Accordingly, since the real property information used in the DM assessment is contained in a separate DM database, anomalies or errors that may exist in the RPI data do not have a material impact on the results of this year's assessment[9].

As further discussed in more detail in a separate report(see Fiscal Year 2003 NASA–Wide Facilities Condition Assessment and Deferred Maintenance Estimate, Report on Real Property Inventory Anomalies), however, a number of issues with the data in the RPI continue to be present in the NASA RPI itself. Many of these identified problems result not from clerical errors in entering (or failing to enter) the data, but from informal policies that Center real property

[9] Although anomalies or errors in the RPI do not affect the results of the Deferred Maintenance Assessment, they do have an impact on the results generated by NASA's Facilities Sustainment Model (FSM), which is used to estimate agency-wide facilities sustainment costs.

personnel have adopted over the years. For example, many facilities are classified according to the process they support, as opposed to the function of the facility itself. This leads to anomalies such as a security fence being classified as a sewage treatment plant (with an assigned unit of measure of "gallons"). Making appropriate changes to the RPI database becomes complicated by the fact that Center personnel who are responsible for the RPI data typically do not have the authority to change the class of a facility. Instead, the process involves getting the real property manager, as well as the program manager and the facility manager all to agree that a facility classification needs to be changed.

Last year's review of the RPI data during the DM Assessment led to a task to prepare a comprehensive report on RPI Anomalies encountered during the 2002 assessment (see Report on Real Property Anomalies, NASW-02010, Task Order 02). As a result of this report, identified anomalies were referred to Center real property personnel for correction or explanation, as appropriate.

The FY03 review of the data in the Real Property Inventory (RPI) discloses that some of the anomalies identified in the FY02 DM assessment continue to be found. Nevertheless, the total number of anomalies is considerably less than the amount identified last year. The results of this year's RPI data review identified the following:

- Facilities with a Book Value less than $5000. (Appendix D)
- Facilities with Questionable or No CRVs (Appendix E shows facilities with no CRV)
- Facilities Found but not in the RPI
- Facilities in the RPI but not Found (Appendix F)
- Facilities with Questionable Classifications
- Facilities with Incorrect UOM Quantities

The following general observations can be drawn from a review of the RPI related data gathered during this year's DM Assessment:

The number of anomalies in FY03 have gone down since the FY02 assessment, while the assessors ability to determine if there is an anomaly has become much more sophisticated resulting in a far more accurate assessment in FY03 than in FY02.

The most important issue regarding the data in the RPI is the proper classification of the facility. Although some facilities were found to be misclassified because their function changed over time (*e.g.*, former R&D building being converted to an administrative function), most of the problem seems to arise from an informal policy to classify numerous support facilities at a site with the same classification as the main facility they support. This same policy seems to be followed at some sites with regard to recording the Current Replacement Value (CRV) of support facilities. That is, the CRV of support facilities is recorded as zero, with the CRV instead included with the CRV of the main facility being supported.

Problems associated with an inappropriate facility classification are compounded by the fact that the RPI database automatically inserts the unit of measure depending upon the classification.

This leads to the example discussed above of a fence having a unit of measure of gallons instead of linear feet.

A comprehensive discussion of suspect classifications, CRV irregularities, as well as other RPI anomalies, is included in the report titled "Report on Real Property Inventory Anomalies." [10]

2.5.1 Facilities With a Book Value Under $5000

According to NPG 8800.15A, *Real Estate Management Program Implementation Manual*, Centers are not required to list facilities with a *book value* of under $5000 in their RPI. This creates some confusion during the assessments because the statement of work requires us to "perform walk-through condition assessments of all NASA facilities." We assessed 1083 facilities with a book value of under $5000. Because not all of these facilities are in the RPI, we had to determine if they were active or inactive, associate them with a DM classification and estimate a CRV. Thus, we generated CRVs for these building that totaled $8.8 million, with a DM estimate of $1.3 million, for facilities that are not included in the RPI.

To account for these facilities we decided to create another table in the DM database similar to the active/inactive field or the program table to address these facilities. This gives Code JX the flexibility to include these items in the DM estimate or exclude them if desired. Appendix D provides a list of these facilities.

2.5.2Facility CRVs That Were Generated for the Assessment

The FY03 report CRV is $22.8M. It differs from the commonly used NASA CRV because it includes facilities that are in an inactive status (mothballed, standby, out grants, etc.) where there is no recorded CRV in the RPI, and facilities that were found but not yet listed in the RPI. Usually these are facilities that are new and do not have a complete record in the RPI; or they were facilities that had a value of less than $5000 for which the RPI does not generate a CRV. As a result of these latter two categories it was necessary to generate an additional $928 million worth of CRV for 575 facilities that did not have CRVs in the RPI.

The CRV was generated in two ways. The preferred method was to use an average cost per unit of measure per DM facility category. This was used when the unit of measure was known. Eighty-nine facilities for a value of $ 22M or .01% of the NASA CRV used this method. The second method was applied to facilities where the unit of measure was unknown and usually the facility category was unknown. First, a DM category was assigned, then an average facility cost was generated by that DM facility category. Four-hundred and eighty-six facilities fell in this category ($906M), or 3.84% of the NASA CRV. These assumed values were then added to the total NASA CRV to create the CRV for the facilities assessment and the DM cost estimate. Appendix E provides a list of these facilities.

2.5.3 Assessment of In/Out Grants

All in/out grant facilities were assessed for this report. The rationale being that even though someone else may currently have an agreement to maintain the building, the building is owned

[10] United States National Aeronautical and Space Administration, *Draft Report on Real Property Inventory Anomalies*. Plexus Scientific, Corp. 2003.

by NASA, and upon the conclusion of the grant the facility would revert to NASA. Therefore NASA must account for the maintenance on this facility.

2.6 Sites not visited but assessed (SOW para. 6k)

In addition to the Centers, NASA also owns 31 smaller, remote,and low value sites worldwide. An examination of the property cards in the RPI on each facility found that only 12 of the sites are active. Of those 12, four are overseas in very remote locations and have a value of less than $20,000; one of those four sites is labeled as a temporary facility on the property card. The other 8 active sites have more significant value. The remaining sites were all inactive located both in the continental United States and overseas. Because of the high cost to visit remote sites, which are typically of low value, it was determined that it was not cost efficient to send an assessment team to all remote and low value sites, but to assess them remotely. These sites were assessed by using a combination of the techniques found in the *Deferred Maintenance Guidebook version 2*. Their total deferred maintenance value is $27.9M or 1.29% of the NASA deferred maintenance total. Their FCI is 2.7. More details can be found in Appendix B.

2.7 Digital Photographs (SOW para. 6p)

The assessment teams took one representative digital photograph of each individual NASA facility in the RPI, except for some underground utilities. These photographs can be used by NASA to associate with its automated on-line real estate records so that users may view the digital photograph of each real property asset in order to gain an understanding of the facility without the need for a site visit. The photographs are contained in accompanying CDs by Center, and labeled by Center and building number (i.e., GSFC33)

The assessment team took an additional 643 digital photographs to support facility assessments for systems rated as condition 1 or 2, and for other facilities or systems where visual evidence was considered to help support the ratings assigned.

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3.0 FY03 ASSESSMENT RESULTS, CONCLUSIONS AND RECOMMENDATIONS

3.1 Results

- For FY03 the Agency FCI is 3.6 (on a scale from 5 (excellent) to 1 (bad) (Table 3-1, Summary Sheet). The FCI for active facilities is 3.7. The FCI for inactive facilities is 3.2. This means that NASA facilities require many minor repairs and some larger repairs, and systems *normally* function satisfactorily but occasionally are *unable to function as intended*.

    - Scientific and R&D facilities - 3.7
    - Mission Operations facilities - 3.9
    - Shuttle Related Facilities - 3.4
    - Low value and remote sites- 2.0 overall - 3.8 (active) 1.0 (inactive)

- Active site FCIs range from 3.0 to 4.7, indicating substantial variations in conditions between some sites.
- The Agency-wide 2003 DM cost estimate is approximately $2.27 billion, which is 10% of NASA's $23 billion CRV. The DM estimate for active sites is about $1.78 billion and the DM estimate on inactive facilities is close to $0.49 billion.

    - Scientific and R&D facilities - $1 billion
    - Mission Operations facilities - $187 million
    - Shuttle Related Facilities - $945 million
    - Low value and remote sites - $29 million - $0.37 million (active) $28.93 million (inactive)[11]

- The electrical systems were the lowest assessed system with an FCI of 3.3 and the highest DM cost estimate at $810 million. The electrical system within the DM facility category "Power generation/power plants" (59 facilities, CRV of $81.7 million) was assessed at 2.7 with a DM cost estimate at $5.5 million.
- The condition assessment once again identified NASA RPI records that required correction including an additional 43 facilities at Poker Flats Research Range that were not included in the F02 assessment.

[11] Of the $28.93 millionDM total for low value and remote sites, $27.36 million resides at Bermuda, a site in the process of being turned over to the local government. This reduces the inactive DM for the low value and remote sites to $1.94 million. The FCI remains at 1.0

Table 3-1compares site, Center, and Agency DM results against Center reported FY02 BMAR and CRV values. [12] (Note: Some of the numbers in the following tables may not add due to rounding.)

Table 3-1. FY03 Summary Table ($B) ***(continues next page)***

Line Name	FY03 CRV Total	FY02 BMAR Total	FY03 DM Total	FCI	Active CRV	Active DM	Active FCI	Inactive CRV	Inactive DM	Inactive FCI
Ames Research Center	$2.37	$0.07	$0.17	4.0	$1.84	$0.06	4.1	$0.53	$0.11	3.4
Crows Landing	$0.07	$0.00	$0.01	3.0	$0.01	$0.00	3.0	$0.07	$0.01	3.0
Camp Parks	$0.01	$0.00	$0.00	3.5	$0.01	$0.00	3.5	$0.00	$0.00	3.4
Moffet Federal Airfield	$1.10	$0.00	$0.12	3.2	$0.70	$0.08	3.1	$0.40	$0.04	3.4
Ames Research Center Total	$3.55	$0.07	$0.30	3.7	$2.55	$0.14	3.8	$1.00	$0.16	3.4
Dryden Flight Research Center	$0.33	$0.01	$0.01	4.2	$0.33	$0.01	4.2	$0.00	$0.00	3.7
Dryden Flight Research Center Total	$0.33	$0.01	$0.01	4.2	$0.33	$0.01	4.2	$0.00	$0.00	3.7
Glenn Research Center	$1.80	$0.06	$0.15	3.6	$1.77	$0.11	3.7	$0.03	$0.04	1.1
Plum Brook Station	$0.71	$0.01	$0.14	3.4	$0.50	$0.03	3.8	$0.21	$0.11	2.5
Glenn Research Center Total	$2.51	$0.07	$0.29	3.6	$2.27	$0.14	3.7	$0.24	$0.16	2.3
Langley Research Center	$2.62	$0.03	$0.15	3.7	$2.40	$0.12	3.7	$0.22	$0.03	3.2
Langley Research Center Total	$2.62	$0.03	$0.15	3.7	$2.40	$0.12	3.7	$0.22	$0.03	3.2
Code R (Aerospace Research)	**$9.01**	**$0.18**	**$0.76**	**3.7**	**$7.55**	**$0.41**	**3.8**	**$1.45**	**$0.34**	**3.2**
Goddard Space Flight Center	$0.92	$0.04	$0.03	4.1	$0.92	$0.03	4.1			
American Samoa Bilateral Ranging Transponder Facility	$0.00	$0.00	$0.00	4.0	$0.00	$0.00	4.0			
Ascension Bilateral Ranging Transponder Facility	$0.00	$0.00	$0.00	4.0	$0.00	$0.00	4.0			
Bilateral Ranging Transponder Total	$0.00	$0.00	$0.00	4.0	$0.00	$0.00	4.0			
Bear Lake Mobile Laser Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Bermuda Mobile Laser Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Easter Island Mobile Laser Site	$0.00	$0.00	$0.00	3.9	$0.00	$0.00	3.9			
Ft. Davis Mobile Laser Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Haystack Mobile Laser Site	$0.00	$0.00	$0.00	3.0	$0.00	$0.00	3.0			
Hawaii Kauai Mobile Laser Site	$0.00	$0.00	$0.00	4.0	$0.00	$0.00	4.0			
Hawaii Maui Mobile Laser Site	$0.00	$0.00	$0.00	3.0	$0.00	$0.00	3.0			
Kwajalein Mobile Laser Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Monument Peak Mobile Laser Site	$0.00	$0.00	$0.00	4.0	$0.00	$0.00	4.0			
Oak Mountain Mobile Laser Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Otay Mountain Mobile Laser Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Owens Valley Mobile Laser Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Platteville Mobile Laser Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Quincy Mobile Laser Site	$0.00	$0.00	$0.00	4.0	$0.00	$0.00	4.0			
Tahiti Mobile Laser Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Yarragadee Mobile Laser Site	$0.00	$0.00	$0.00	4.0	$0.00	$0.00	4.0			
Mobile Laser Site Total	$0.00	$0.00	$0.00	2.6	$0.00	$0.00	3.9	$0.00	$0.00	1.0
Shiloh Microwave Link Facility		$0.00								
Bermuda Spaceflight Tracking/Data Network	$0.02	$0.00	$0.03	1.0				$0.02	$0.03	1.0
Hawaii Spaceflight Tracking/Data Network (STDN)	$0.03	$0.00	$0.00	4.2	$0.03	$0.00	4.2			
Ponce De Leon Space Flight Tracking/Data Network (STDN)	$0.00	$0.00	$0.00	4.0	$0.00	$0.00	4.0			
Spaceflight Tracking/Data Network Total	$0.06	$0.03	$0.03	3.0	$0.04	$0.00	4.2	$0.02	$0.03	1.0
Yarragadee Space Transportation System Facility	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Space Transportation System Total	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Cabo San Lucas Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Cerro Tololo Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0

[12] The Shiloh site (SMLF) was assessed as part of Ponce De Leon Space Flight Tracking and Data Network (PSTDN) and the Brooks site was done as part of JSC.

Line Name	FY03 CRV Total	FY02 BMAR Total	FY03 DM Total	FCI	Active CRV	Active DM	Active FCI	Inactive CRV	Inactive DM	Inactive FCI
Ensenada Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Iquique Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Mazatlan Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Point Arguello Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Santiago Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	4.0	$0.00	$0.00	4.0			
Soccorro Island Verylong Baseline Interferometry	$0.00	$0.00	$0.00	1.0				$0.00	$0.00	1.0
Verylong Baseline Interferometry Total	$0.00	$0.00	$0.00	1.3	$0.00	$0.00	4.0	$0.00	$0.00	1.0
Wallops Flight Facility	$0.64	$0.03	$0.03	3.9	$0.61	$0.02	3.9	$0.03	$0.00	3.6
National Balloon Facility, Palestine, TX	$0.01	$0.00	$0.00	4.7	$0.01	$0.00	4.7			
Poker Flats Research Range, Fairbanks, AK	$0.20	$0.00	$0.00	4.4	$0.20	$0.00	4.4			
Wallops Flight Facility Total	$0.84	$0.03	$0.03	4.1	$0.81	$0.03	4.1	$0.03	$0.00	3.6
Goddard Space Flight Center Total	$1.82	$0.04	$0.09	4.1	$1.77	$0.06	4.1	$0.05	$0.03	2.5
Code Y (Earth Science)	**$1.82**	**$0.10**	**$0.09**	**4.1**	**$1.77**	**$0.06**	**4.1**	**$0.05**	**$0.03**	**2.5**
Jet Propulsion Laboratory	$0.64	$0.00	$0.03	4.0	$0.64	$0.03	4.0			
Canberra Deep Space Communications Complex, Australia	$0.15	$0.00	$0.00	4.3	$0.15	$0.00	4.3			
Goldstone, Deep Space Communications Complex ,CA	$0.33	$0.01	$0.04	4.0	$0.28	$0.01	4.2	$0.05	$0.03	2.7
Madrid Deep Space Communications Complex, Spain	$0.13	$0.01	$0.01	3.6	$0.13	$0.01	3.6			
Deep Space Network Total	$0.60	$0.03	$0.06	4.0	$0.56	$0.03	4.1	$0.05	$0.03	2.7
Table Mountain Observatory	$0.02	$0.00	$0.00	3.1	$0.02	$0.00	3.1			
Jet Propulsion Laboratory Total	$1.26	$.03	$0.09	4.0	$1.21	$0.05	4.0	$0.05	$0.03	2.7
Code S (Astrobiology & Space Research / Science)	**$1.26**	**$0.03**	**$0.09**	**4.0**	**$1.21**	**$0.05**	**4.0**	**$0.05**	**$0.03**	**2.7**
Johnson Space Center	$1.36	$0.18	$0.11	3.5	$1.36	$0.11	3.5	$0.00	$0.00	2.4
Ellington Field	$0.09	$0.00	$0.01	3.6	$0.09	$0.01	3.6			
Palmdale, NASA Industrial Plant	$0.00	$0.00	$0.00	3.8	$0.00	$0.00	3.8			
Palmdale, USAF Industrial Plant	$0.03	$0.00	$0.00	3.9	$0.03	$0.00	3.9			
Palmdale Industrial Plant Total	$0.04	$0.00	$0.00	3.9	$0.04	$0.00	3.9			
Downey, NASA Industrial Plant	$0.00	$0.00	$0.00					$0.00	$0.00	
White Sands Test Facility	$0.26	$0.02	$0.01	4.0	$0.26	$0.01	4.0			
WSTF Space Harbor	$0.01	$0.00	$0.00	3.8	$0.01	$0.00	3.8			
White Sands 1st TDRSS	$0.05	$0.01	$0.00	4.0	$0.05	$0.00	4.0			
White Sands 2nd TDRSS	$0.03	$0.00	$0.00	4.0	$0.03	$0.00	4.0			
White Sands Test Facility Total	$0.36	$0.03	$0.01	4.0	$0.36	$0.01	4.0			
Johnson Space Center Total	$1.84	$0.20	$0.14	3.6	$1.84	$0.14	3.6	$0.00	$0.00	2.4
Kennedy Space Center	$4.51	$0.20	$0.83	3.3	$4.47	$0.82	3.3	$0.04	$0.01	3.2
Cape Canaveral Air Force Station	$0.18	$0.00	$0.02	3.7	$0.17	$0.02	3.7	$0.01	$0.00	4.0
Gambia	$0.01	$0.00	$0.00	3.8	$0.01	$0.00	3.8			
Morocco	$0.00	$0.00	$0.00	4.0	$0.00	$0.00	4.0			
Transoceanic Abort Landing Site Total	$0.01	$0.00	$0.00	3.8	$0.01	$0.00	3.8			
Kennedy Space Center Total	$4.70	$0.20	$0.85	3.3	$4.65	$0.84	3.3	$0.05	$0.01	3.4
Marshall Space Flight Center	$1.31	$0.17	$0.12	3.8	$1.16	$0.10	3.8	$0.15	$0.03	3.2
Brigham City, Utah	$0.00	$0.00	$0.00	3.8	$0.00	$0.00	3.8			
Michoud Assembly Facility	$1.10	$0.04	$0.10	3.4	$1.01	$0.07	3.5	$0.10	$0.02	2.8
Santa Susanna Field Laboratory	$0.09	$0.00	$0.01	3.4	$0.07	$0.01	3.4	$0.02	$0.00	3.4
Marshall Space Flight Center Total	$2.51	$0.20	$0.23	3.6	$2.24	$0.18	3.7	$0.27	$0.05	3.1
Stennis Space Center	$1.49	$0.08	$0.11	3.5	$1.45	$0.10	3.5	$0.04	$0.01	3.2
Stennis Space Center Tenants	$0.13	$0.00	$0.00	3.9	$0.13	$0.00	3.9			
Stennis Space Center Total	$1.62	$0.08	$0.12	3.5	$1.58	$0.10	3.6	$0.04	$0.01	3.2
Code M (Human Exploration & Development)	**$10.67**	**$0.70**	**$1.34**	**3.5**	**$10.31**	**$1.26**	**3.5**	**$0.36**	**$0.08**	**3.1**
NASA TOTAL	**$22.75**	**$1.00**	**$2.27**	**3.6**	**$20.84**	**$1.78**	**3.7**	**$1.91**	**$0.49**	**3.2**

Table 3-1. Summary Table

Table 3-2 shows the DM cost estimates for each of the nine systems by site, Center, Enterprise, and the Agency.

Table 3-2. By DM ($M) by System for NASA as a Whole (continues next page)

Line Name	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Conveyance	Program Support Equipment
Ames Research Center	$7.39	$10.84	$3.41	$4.30	$74.79	$8.89	$2.40	$0.32	$58.95
Crows Landing	$7.18	$0.08	$0.07	$0.11	$3.69	$0.07	$0.12	$0.00	$0.00
Camp Parks	$0.05	$0.36	$0.07	$0.02	$0.04	$0.02	$0.01	$0.00	$0.00
Moffet Federal Airfield	$51.01	$14.47	$6.82	$5.29	$29.18	$9.01	$3.86	$0.23	$0.00
Ames Research Center Total	$65.64	$25.75	$10.38	$9.72	$107.70	$18.00	$6.38	$0.54	$58.95
Dryden Flight Research Center	$1.24	$1.30	$0.42	$0.28	$2.95	$0.98	$0.20	$0.03	$0.01
Dryden Flight Research Center Total	$1.24	$1.30	$0.42	$0.28	$2.95	$0.98	$0.20	$0.03	$0.01
Glenn Research Center	$64.08	$9.64	$14.64	$5.58	$28.60	$14.48	$4.98	$0.97	$4.98
Plum Brook Station	$48.25	$6.11	$6.62	$12.20	$38.05	$22.19	$9.23	$0.96	$0.56
Glenn Research Center Total	$112.33	$15.76	$21.26	$17.78	$66.65	$36.66	$14.21	$1.93	$5.54
Langley Research Center	$14.62	$9.55	$11.40	$8.43	$58.10	$18.50	$6.19	$1.60	$24.79
Langley Research Center Total	$14.62	$9.55	$11.40	$8.43	$58.10	$18.50	$6.19	$1.60	$24.79
Code R (Aerospace Research)	**$193.82**	**$52.35**	**$43.46**	**$36.22**	**$235.41**	**$74.14**	**$26.99**	**$4.11**	**$89.29**
Goddard Space Flight Center	$6.58	$5.42	$3.43	$3.02	$4.38	$5.83	$2.35	$0.18	$0.18
American Samoa Bilateral Ranging Transponder Facility	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ascension Bilateral Ranging Transponder Facility	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Bilateral Ranging Transponder Total	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Bear Lake Mobile Laser Site	$0.13	$0.00	$0.02	$0.00	$0.05	$0.01	$0.00	$0.00	$0.00
Bermuda Mobile Laser Site	$0.11	$0.01	$0.02	$0.01	$0.05	$0.02	$0.00	$0.00	$0.00
Easter Island Mobile Laser Site	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ft. Davis Mobile Laser Site	$0.04	$0.00	$0.01	$0.00	$0.02	$0.00	$0.00	$0.00	$0.00
Haystack Mobile Laser Site	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Hawaii Kauai Mobile Laser Site	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Hawaii Maui Mobile Laser Site	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Kwajalein Mobile Laser Site	$0.08	$0.00	$0.01	$0.00	$0.03	$0.01	$0.00	$0.00	$0.00
Monument Peak Mobile Laser Site	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Oak Mountain Mobile Laser Site	$0.10	$0.00	$0.01	$0.00	$0.04	$0.01	$0.00	$0.00	$0.00
Otay Mountain Mobile Laser Site	$0.17	$0.01	$0.02	$0.00	$0.07	$0.01	$0.00	$0.00	$0.00
Owens Valley Mobile Laser Site	$0.06	$0.00	$0.01	$0.00	$0.02	$0.00	$0.00	$0.00	$0.00
Platteville Mobile Laser Site	$0.10	$0.00	$0.01	$0.00	$0.04	$0.01	$0.00	$0.00	$0.00
Quincy Mobile Laser Site	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tahiti Mobile Laser Site	$0.02	$0.00	$0.00	$0.00	$0.01	$0.00	$0.00	$0.00	$0.00
Yarragadee Mobile Laser Site	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Mobile Laser Site Total	$0.82	$0.04	$0.11	$0.03	$0.35	$0.08	$0.00	$0.00	$0.00
Bermuda Spaceflight Tracking/Data Network	$11.82	$1.10	$3.12	$1.83	$5.90	$2.92	$0.65	$0.02	$0.00
Hawaii Spaceflight	$0.22	$0.09	$0.37	$0.11	$0.53	$0.14	$0.03	$0.00	$0.00

Line Name	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Conveyance	Program Support Equipment
Tracking/Data Network (STDN)									
Ponce De Leon Space Flight Tracking/Data Network (STDN)	$0.00	$0.00	$0.00	$0.00	$0.01	$0.00	$0.00	$0.00	$0.00
Space Flight Tracking/Data Network Total	$12.04	$1.20	$3.50	$1.93	$6.44	$3.06	$0.68	$0.02	$0.00
Yarragadee Space Transportation System Facility	$0.01	$0.00	$0.00	$0.00	$0.01	$0.00	$0.00	$0.00	$0.00
Space Transportation System Total	$0.01	$0.00	$0.00	$0.00	$0.01	$0.00	$0.00	$0.00	$0.00
Cabo San Lucas Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Cerro Tololo Verylong Baseline Interferometry Site	$0.01	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ensenada Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Iquique Verylong Baseline Interferometry Site	$0.01	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Mazatlan Verylong Baseline Interferometry Site	$0.04	$0.00	$0.01	$0.00	$0.02	$0.00	$0.00	$0.00	$0.00
Point Arguello Verylong Baseline Interferometry Site	$0.02	$0.00	$0.00	$0.00	$0.01	$0.00	$0.00	$0.00	$0.00
Santiago Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Soccorro Island Verylong Baseline Interferometry	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Verylong Baseline Interferometry Total	$0.08	$0.00	$0.01	$0.00	$0.03	$0.01	$0.00	$0.00	$0.00
Wallops Flight Facility	$10.27	$2.54	$2.17	$1.16	$4.08	$2.43	$2.44	$0.02	$0.02
National Balloon Facility, Palestine, TX	$0.00	$0.02	$0.00	$0.00	$0.00	$0.01	$0.00	$0.00	$0.00
Poker Flats Research Range, Fairbanks, AK	$1.83	$0.11	$1.29	$0.08	$0.54	$0.39	$0.04	$0.00	$0.00
Wallops Flight Facility Total	$12.10	$2.67	$3.46	$1.25	$4.62	$2.83	$2.48	$0.02	$0.02
Goddard Space Flight Center Total	$31.63	$9.33	$10.51	$6.24	$15.82	$11.81	$5.52	$0.21	$0.21
Code Y (Earth Science)	**$31.63**	**$9.33**	**$10.51**	**$6.24**	**$15.82**	**$11.81**	**$5.52**	**$0.21**	**$0.21**
Jet Propulsion Laboratory	$4.41	$5.19	$1.97	$1.48	$8.17	$3.52	$1.83	$0.14	$0.25
Canberra Deep Space Communications Complex, Australia	$0.16	$0.46	$0.18	$0.13	$0.93	$0.08	$0.13	$0.03	$2.51
Goldstone, Deep Space Communications Complex ,CA	$20.17	$2.34	$5.20	$2.97	$8.39	$4.23	$1.13	$0.06	$0.01
Madrid Deep Space Communications Complex, Spain	$5.29	$0.43	$1.07	$0.09	$1.17	$0.23	$0.06	$0.01	$0.00
Deep Space Network Total	$25.62	$3.24	$6.45	$3.19	$10.49	$4.54	$1.32	$0.10	$2.51
Table Mountain Observatory	$1.72	$0.02	$0.06	$0.01	$0.08	$0.01	$0.00	$0.00	$0.00
Jet Propulsion Laboratory Total	$31.75	$8.45	$8.47	$4.68	$18.74	$8.08	$3.16	$0.25	$2.77
Code S (Astrobiology & Space Research / Science)	**$31.75**	**$8.45**	**$8.47**	**$4.68**	**$18.74**	**$8.08**	**$3.16**	**$0.25**	**$2.77**
Johnson Space Center	$20.74	$15.83	$3.73	$5.98	$25.92	$32.27	$5.62	$1.78	$3.11
Ellington Field	$1.38	$1.33	$0.38	$0.18	$1.97	$0.48	$0.26	$0.01	$0.00
Palmdale, NASA Industrial Plant	$0.01	$0.01	$0.01	$0.01	$0.09	$0.01	$0.00	$0.00	$0.00
Palmdale, USAF Industrial Plant	$0.27	$0.15	$0.04	$0.02	$0.37	$0.07	$0.06	$0.01	$0.00
Palmdale Industrial Plant Total	$0.27	$0.16	$0.05	$0.04	$0.46	$0.09	$0.06	$0.01	$0.00
Downey, NASA Industrial Plant	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Line Name	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Conveyance	Program Support Equipment
White Sands Test Facility	$2.80	$0.91	$0.53	$0.11	$4.62	$0.36	$0.28	$0.22	$0.19
WSTF Space Harbor	$0.13	$0.03	$0.14	$0.10	$0.06	$0.03	$0.00	$0.00	$0.00
White Sands 1st TDRSS	$0.70	$0.69	$0.08	$0.05	$0.75	$0.13	$0.04	$0.00	$0.00
White Sands 2nd TDRSS	$0.25	$0.45	$0.01	$0.00	$0.11	$0.43	$0.02	$0.00	$0.00
White Sands Test Facility Total	$3.88	$2.08	$0.75	$0.26	$5.54	$0.95	$0.34	$0.22	$0.19
Johnson Space Center Total	$26.28	$19.40	$4.91	$6.46	$33.89	$33.79	$6.28	$2.02	$3.30
Kennedy Space Center	$81.71	$96.97	$36.60	$26.05	$390.02	$165.96	$26.66	$2.07	$3.28
Cape Canaveral Air Force Station	$1.11	$2.54	$1.75	$1.25	$7.41	$6.60	$0.64	$0.03	$0.00
Gambia	$0.06	$0.04	$0.03	$0.03	$0.08	$0.03	$0.04	$0.00	$0.00
Morocco	$0.00	$0.01	$0.00	$0.00	$0.01	$0.00	$0.00	$0.00	$0.00
Transoceanic Abort Landing Site Total	$0.06	$0.04	$0.04	$0.03	$0.09	$0.04	$0.04	$0.00	$0.00
Kennedy Space Center Total	$82.88	$99.56	$38.39	$27.33	$397.51	$172.60	$27.34	$2.10	$3.28
Marshall Space Flight Center	$16.81	$6.82	$13.51	$6.07	$56.27	$17.27	$5.09	$1.87	$1.21
Brigham City, Utah	$0.00	$0.01	$0.00	$0.00	$0.03	$0.01	$0.00	$0.00	$0.00
Michoud Assembly Facility	$22.93	$11.92	$14.52	$8.05	$15.29	$18.10	$7.19	$0.20	$0.02
Santa Susanna Field Laboratory	$3.24	$0.65	$0.80	$0.49	$3.93	$0.27	$0.87	$0.04	$0.00
Marshall Space Flight Center Total	$42.98	$19.40	$28.84	$14.62	$75.52	$35.65	$13.16	$2.11	$1.23
Stennis Space Center	$43.12	$5.28	$5.42	$2.35	$29.43	$4.57	$6.86	$4.21	$9.87
Stennis Space Center Tenants	$0.58	$0.65	$0.40	$0.22	$0.69	$1.13	$0.10	$0.18	$0.00
Stennis Space Center Total	$43.71	$5.92	$5.82	$2.57	$30.12	$5.70	$6.96	$4.39	$9.87
Code M (Human Exploration & Development)	**$195.84**	**$144.28**	**$77.95**	**$50.98**	**$537.04**	**$247.74**	**$53.75**	**$10.62**	**$17.69**
NASA TOTAL	**$453.05**	**$214.42**	**$140.40**	**$98.12**	**$807.02**	**$341.76**	**$89.41**	**$15.20**	**$109.96**

Table 3-2. By DM ($M) by System for NASA as a Whole

Table 3-3 shows the System Condition Index for each system.

Table 3-3. NASA SCI as a Whole (continues next page)

Line Name	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Conveyance	Program Support Equipment
Ames Research Center	4.3	3.7	4.1	4.1	3.4	3.8	3.9	4.4	3.8
Crows Landing	3.1	3.1	3.1	2.6	1.6	2.8	2.8		
Camp Parks	3.9	2.0	3.0	3.0	3.0	3.0	3.5		
Moffet Federal Airfield	3.2	3.1	3.5	3.5	3.2	3.3	3.4	2.2	
Ames Research Center Total	3.8	3.5	3.9	3.9	3.3	3.6	3.7	4.4	3.8
Dryden Flight Research Center	4.4	4.1	4.4	4.2	3.9	4.3	4.4	4.3	4.6
Dryden Flight Research Center Total	4.4	4.1	4.4	4.2	3.9	4.3	4.4	4.3	4.6
Glenn Research Center	3.7	3.8	3.6	3.8	3.5	3.4	3.6	3.6	4.0
Plum Brook Station	3.7	3.5	3.7	3.2	2.8	3.4	3.3	3.6	3.7
Glenn Research Center Total	3.7	3.7	3.7	3.6	3.3	3.4	3.5	3.6	4.0
Langley Research Center	4.0	3.9	3.8	3.7	3.2	3.5	3.5	4.0	3.8

Line Name	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Conveyance	Program Support Equipment
Langley Research Center Total	4.0	3.9	3.8	3.7	3.2	3.5	3.5	4.0	3.8
Code R (Aerospace Research)	**3.8**	**3.7**	**3.8**	**3.7**	**3.3**	**3.6**	**3.6**	**4.0**	**3.8**
Goddard Space Flight Center	4.1	4.0	4.1	4.1	4.3	4.1	3.9	4.4	4.6
American Samoa Bilateral Ranging Transponder Facility	4.0	4.0	4.0	4.0	4.0	4.0			
Ascension Bilateral Ranging Transponder Facility	4.0	4.0	4.0	4.0	4.0	4.0			
Bilateral Ranging Transponder Total	4.0	4.0	4.0	4.0	4.0	4.0			
Bear Lake Mobile Laser Site	1.0	1.0	1.0	1.0	1.0	1.0			
Bermuda Mobile Laser Site	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Easter Island Mobile Laser Site	3.9	3.9	3.9	4.0	3.9	4.0			
Ft. Davis Mobile Laser Site	1.0	1.0	1.0	1.0	1.0	1.0			
Haystack Mobile Laser Site	3.0	3.0	3.0	3.0	3.0				
Hawaii Kauai Mobile Laser Site	4.0	4.0	4.0	4.0	4.0				
Hawaii Maui Mobile Laser Site	3.0	3.0	3.0	3.0	3.0				
Kwajalein Mobile Laser Site	1.0	1.0	1.0	1.0	1.0	1.0			
Monument Peak Mobile Laser Site	4.0	4.0	4.0	4.0	4.0	4.0			
Oak Mountain Mobile Laser Site	1.0	1.0	1.0	1.0	1.0	1.0			
Otay Mountain Mobile Laser Site	1.0	1.0	1.0	1.0	1.0	1.0			
Owens Valley Mobile Laser Site	1.0	1.0	1.0	1.0	1.0	1.0			
Platteville Mobile Laser Site	1.0	1.0	1.0	1.0	1.0	1.0			
Quincy Mobile Laser Site	4.0	4.0	4.0	4.0	4.0	4.0			
Tahiti Mobile Laser Site	1.0	1.0	1.0	1.0	1.0	1.0			
Yarragadee Mobile Laser Site	4.0	4.0	4.0	4.0	4.0	4.0			
Mobile Laser Site Total	2.7	2.6	2.6	2.3	2.7	2.5	1.0	1.0	
Bermuda Spaceflight Tracking/Data Network	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Hawaii Spaceflight Tracking/Data Network (STDN)	4.5	4.4	3.6	4.1	3.7	3.9	4.5		4.7
Ponce De Leon Space Flight Tracking/Data Network (STDN)	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
Space Flight Tracking/Data Network Total	3.5	3.2	2.6	2.8	2.6	2.0	3.0	1.0	4.7
Yarragadee Space Transportation System Facility	1.0	1.0	1.0	1.0	1.0	1.0			
Space Transportation System Total	1.0	1.0	1.0	1.0	1.0	1.0			
Cabo San Lucas Verylong Baseline Interferometry Site	1.0	1.0	1.0	1.0	1.0	1.0			
Cerro Tololo Verylong Baseline Interferometry Site	1.0	1.0	1.0	1.0	1.0	1.0			
Ensenada Verylong Baseline Interferometry Site	1.0	1.0	1.0	1.0	1.0	1.0			
Iquique Verylong Baseline Interferometry Site	1.0	1.0	1.0	1.0	1.0	1.0			
Mazatlan Verylong Baseline Interferometry Site	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Point Arguello Verylong Baseline Interferometry Site	1.0	1.0	1.0	1.0	1.0	1.0			
Santiago Verylong Baseline Interferometry Site	4.0								
Soccorro Island Verylong Baseline Interferometry	1.0	1.0	1.0	1.0	1.0	1.0			

Line Name	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Conveyance	Program Support Equipment
Verylong Baseline Interferometry Total	1.5	1.0	1.0	1.0	1.0	1.0	1.0		
Wallops Flight Facility	3.9	4.0	4.0	4.0	4.0	3.9	3.7	4.5	4.0
National Balloon Facility, Palestine, TX	4.9	4.2	4.6	4.6	4.9	4.0	5.0	5.0	4.0
Poker Flats Research Range, Fairbanks, AK	4.4	4.8	4.3	4.6	4.5	4.3	4.4		
Wallops Flight Facility Total	4.1	4.2	4.1	4.2	4.2	4.0	3.7	4.5	4.0
Goddard Space Flight Center Total	4.0	4.0	4.1	4.1	4.2	4.0	3.8	4.4	4.6
Code Y (Earth Science)	**4.0**	**4.0**	**4.1**	**4.1**	**4.2**	**4.0**	**3.8**	**4.4**	**4.6**
Jet Propulsion Laboratory	4.1	3.9	4.1	4.1	3.7	4.0	4.0	4.3	4.1
Canberra Deep Space Communications Complex, Australia	4.7	4.4	4.4	4.5	4.3	4.6	4.3	3.9	3.7
Goldstone, Deep Space Communications Complex ,CA	4.1	3.7	3.8	3.2	3.5	3.5	3.7	3.8	5.0
Madrid Deep Space Communications Complex, Spain	3.3	4.0	3.8	4.4	3.8	4.1	4.5	4.0	5.0
Deep Space Network Total	4.0	3.9	4.0	3.7	3.8	3.9	4.1	3.9	4.4
Table Mountain Observatory	2.8	4.1	3.7	4.0	3.8	4.1	4.2	4.0	3.5
Jet Propulsion Laboratory Total	4.0	3.9	4.1	4.1	3.7	4.0	4.0	4.2	4.3
Code S (Astrobiology & Space Research / Science)	**4.0**	**3.9**	**4.1**	**4.1**	**3.7**	**4.0**	**4.0**	**4.2**	**4.3**
Johnson Space Center	3.7	3.4	3.9	3.8	3.3	3.1	3.2	3.3	3.3
Ellington Field	3.8	3.3	3.8	3.9	3.3	3.7	3.7	4.0	
Palmdale, NASA Industrial Plant	4.0	4.5	4.0	3.8	3.0	4.0	4.0		
Palmdale, USAF Industrial Plant	3.8	4.0	4.0	4.0	3.9	4.0	4.0	4.0	
Palmdale Industrial Plant Total	3.8	4.1	4.0	4.0	3.8	4.0	4.0	4.0	
Downey, NASA Industrial Plant									
White Sands Test Facility	4.1	4.0	4.0	4.2	3.7	4.0	3.8	3.2	4.2
WSTF Space Harbor	4.0	3.3	2.4	2.5	3.8	3.1	3.9		
White Sands 1st TDRSS	4.2	3.3	4.1	4.1	3.4	4.0	4.1		
White Sands 2nd TDRSS	4.0	3.0	4.8	4.9	4.0	3.0	3.9		
White Sands Test Facility Total	4.1	3.7	4.1	4.2	3.7	3.8	3.9	3.2	4.2
Johnson Space Center Total	3.8	3.5	3.9	3.9	3.4	3.2	3.4	3.3	3.6
Kennedy Space Center	3.8	2.9	3.4	3.3	2.7	2.7	3.3	3.5	3.5
Cape Canaveral Air Force Station	4.2	3.4	3.6	3.4	3.2	2.9	3.7	4.0	4.0
Gambia	3.9	3.0	3.7	3.0	3.9	3.0	4.0		
Morocco	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
Transoceanic Abort Landing Site Total	3.9	3.5	3.8	3.5	3.9	3.5	4.0		
Kennedy Space Center Total	3.8	2.9	3.4	3.3	2.7	2.7	3.3	3.6	3.5
Marshall Space Flight Center	4.1	4.0	3.7	3.9	3.2	3.6	3.7	4.0	4.1
Brigham City, Utah	4.0	4.0	4.0	4.0	3.0	3.0	4.0		
Michoud Assembly Facility	3.5	3.6	3.2	3.2	3.8	3.0	3.5	4.2	4.0
Santa Susanna Field Laboratory	3.5	3.3	3.4	3.1	3.1	3.7	3.1	3.3	
Marshall Space Flight Center Total	3.8	3.8	3.5	3.6	3.5	3.3	3.6	4.0	4.1
Stennis Space Center	3.6	3.6	3.4	3.5	3.3	3.6	3.1	3.0	3.5
Stennis Space Center Tenants	3.9	4.1	3.9	4.0	4.0	3.6	4.0	3.2	

Line Name	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Conveyance	Program Support Equipment
Stennis Space Center Total	3.6	3.7	3.6	3.7	3.3	3.6	3.2	3.0	3.5
Code M (Human Exploration & Development)	**3.8**	**3.3**	**3.6**	**3.6**	**3.1**	**3.1**	**3.4**	**3.4**	**3.7**
NASA TOTAL	**3.8**	**3.5**	**3.7**	**3.7**	**3.3**	**3.4**	**3.5**	**3.8**	**3.8**

Table 3-3. NASA SCI as a Whole

Table 3-4 is the facility condition and deferred maintenance cost by DM category.

Table 3-4. Facility Condition by Deferred Maintenance Facility Category

DM Category	NASA Facility Description	CRV Total ($M)	FCI	DM Total ($M)	Facility Count
1	R&D and Test Buildings	$6,117	3.8	$481	530
2	R&D Structures and Facilities	$973	3.4	$194	119
3	Wind Tunnels	$2,813	3.8	$197	74
4	Engine/Vehicle Static Test Facilities	$1,194	3.4	$140	119
5	Administrative Buildings	$1,446	3.8	$132	278
6	Training Buildings	$224	3.4	$21	24
7	Trailers	$28	3.5	$5	349
8	Storage Buildings	$405	3.8	$33	468
9	Storage Facilities	$137	4.0	$6	426
10	Fuel Storage Tanks	$88	3.9	$4	117
10.1	Specialized Liquid Storage Tanks	$0	4.6	$0	17
10.2	Fueling Stations & Systems	$19	4.0	$1	37
11	Magazines	$30	4.0	$2	90
12	Communication and Tracking Buildings	$193	3.8	$24	145
13	Communication and Tracking Facilities	$241	3.9	$25	146
13.1	Large Antennas	$395	4.2	$17	22
13.2	Small Antennas	$31	4.2	$1	57
14	Mission Control Operations Buildings	$343	4.0	$14	14
15	Lighting	$56	2.9	$17	57
16	Electrical Distribution System	$500	3.4	$39	83
16.1	Power Generation/Power Plant	$92	3.8	$7	54
16.2	Electric Substations, Switchgear & Transformer Yards	$326	3.8	$33	234
17	HVAC Distribution	$461	3.7	$23	87
17.1	HVAC Generation	$497	3.7	$36	103
18	Waste Water Collection & Disposal System	$121	3.6	$8	96
18.1	Waste Water Facilities & Treatment Plants	$53	4.0	$5	96
18.2	Storm Drains, Ditches, Dams, Retaining walls	$118	3.2	$11	46
19	Potable Water Distribution System	$218	3.6	$14	157
19.1	Potable Water Facilities & Treatment Plants	$70	3.8	$6	86
20	Launch Pads	$603	4.0	$27	13
20.1	Launch support camera pads	$4	4.1	$0	33
20.2	Launch propellant & high pressure gas facilities	$174	3.5	$19	23
21	Pavement	$1,456	3.5	$107	235
22	Rail	$29	3.0	$3	2

DM Category	NASA Facility Description	CRV Total ($M)	FCI	DM Total ($M)	Facility Count
23	Maintenance Facilities and PW Shops	$457	3.3	$53	245
23.1	Operational maintenance facilities	$848	3.2	$59	63
24	Other Buildings	$1,520	3.0	$474	440
25	Other Facilities	$317	3.9	$16	363
26	Land & Easements	$0		$0	81
27	Compressed Air Distribution	$1	2.0	$1	1
27.1	Compressed Air Generation	$83	3.5	$8	13
28	Prefabricated buildings, various uses	$24	4.1	$1	93
29	Berthing & Housing	$49	3.7	$5	42

3.2 Conclusions

- Perhaps the most critical system to NASA, the electrical system, has the lowest condition assessment (3.3) and the highest DM value ($807M) of the nine assessed systems. This assessment rating indicates that this system may not function as intended with the consistency required by NASA, especially within R&D and operational facilities. In over 27% of the electrical ratings assessors depreciated the ratings of the system because a majority of it was excessively old, even though the system was functional at the time. Age related deprecation is explained in paragraph 4.1.5, in the FY02 assessment report and in the *DM Guidebook*. Age related deprecation also applies to HVAC systems (3.4 and $342M).
- NASA's facilities are in good to fair condition with the critical facilities (scientific and operations) generally in better condition than the other facilities. However, considering these ratings range between *normally* function as intended and *occasionally are unable to function as intended,* these ratings are too low for critical facilities because the potential exists that missions and programs may be impacted.
- The BMAR estimate and the DM estimate differ because the DM model requires that all facilities be assessed including all types of inactive facilities, the differences in Center-developed procedures for BMAR content, and revision of the facilities inventory.
- The single largest RPI problem is the misclassification of facilities within the RPI. The misclassification of a facility or the grouping of several different types of facilities under a single CRV supplies incorrect information to the DM parametric model such as incorrect CRVs, incorrect UM, and incorrect facility system percentages resulting in DM estimate that may not truly reflect the status of the facilities on the ground, and may not lead to the highest quality data possible.
- As required by this task, teams assessed all NASA facilities, including those that are in mothballed, abandoned, heritage, out-grant or standby status, those that have value of less than $5,000, and those that are remote and low value. The DM estimate includes costs to repair facilities that NASA may not wish to maintain.
- The site at Bermuda contributes over 90% of the DM estimate for low value and remote sites producing an unrealistic view of the condition of these facilities.

3.3 Recommendations

- NASA should consider making the electrical system and the facility types that support it (lighting systems, the distribution systems, the generation systems and the substations and transformers) its highest maintenance priority. Although the Centers are trying to upgrade both their electrical and HVAC systems, many of these systems' ages make them susceptible to a critical or massive failure that will affect R&D programs and operational events, or a major safety problem that requires NASA headquarters intervention.
- NASA should develop a list of critical R&D and operational facilities to help prioritize maintenance funding. This is a complex issue because critical facilities vary from Center to Center in accordance with the Center's mission(s).
- NASA should consider tracking maintenance dollars by DM system.
- NASA should develop a guidebook on the classification of facilities similar to the one used by DOD. The current NASA guidance merely lists the types of facilities and does not fully explain the considerations in classifying a facility. The publishing of such guidance should be immediately followed by a workshop to correct classification errors within the RPI. Only after this is completed will NASA have truly quality information of this sort in the RPI.
- Both the National Scientific Balloon Facility at Palestine, Texas, and the site at Brigham City, Utah, are small sites that are capable of being assessed using a remote assessment technique. NASA should assess both using non-visit methods.
- The Bermuda site should not be assessed, and should not contribute to the Agency DM estimate. Because it is in the process of being transferred to the government of Bermuda, it should be treated similar to Downey, which was not assessed and did not contribute to the Agency DM estimated due to the pending transfer to the city.
- NASA must establish whether the new 43 buildings at Poker Flats Research Range belong to NASA, the University of Alaska (which shares the site), or a third party.
- NASA should populate the databases' "program" table in addition to the currently existing shuttle facilities data.

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4.0 COMPARISON BETWEEN FY02 AND FY03 REPORTS

Between the FY02 assessment and the FY03 assessment there was a great deal of analysis and work on the DM model. This experience produced a better assessment in many ways. As a result, to appropriately compare ’02 data and ’03 data changes had to be made to the ’02 data. First was the change in the CRV between the years. NASA does this using the Engineering News Review annual inflation cost factor. For this year the increase was a 1.85% increase over last year. Since the DM model is based on CRV this is an important piece of information. Other adjustments were due to the adaptation and clarification of the assessment guidelines that were on-going during the ’02 assessment and were not finalized in the DM guidebook on its completion in March, 2003. Many of these were corrected last year during the assessment, but upon closer scrutiny, a few remained to be addressed. These updates included changes in the calculation for active and inactive sites and in SCIs at the site and Center level; in rating nonexistent systems; in rating trailers; in age related reduction for systems; and in guidance on the assessment of program support equipment. These are discussed below, but, they had little effect on the ’02 report.

4.1 Changes in Guidance and Techniques from the FY02 Assessment

4.1.1 New Calculation Method for Active Sites, Inactive Sites and SCI.

In the FY02 report there was difficulty developing a formula to calculate a weighted FCI for active sites, inactive sites and by system because we did not have a CRV by system. The result was the use of simple averages to calculate the results of these columns found in tables 3-1 through 3-4 instead of a number weighted or normalized to the CRV as per the FCI. This has been corrected in the database for both active and inactive sites which are now calculated the same way as the FCI. The FY03 report has corrected this for the system condition index by now using a CRV based on the system CRV percentage, then placing this CRV in a weighted calculation to determine the FCI of active and inactive sites and the SCI. For the details of the calculation see paragraph 2.4.4.

4.1.2 Rating Nonexistent Systems.

Initial guidance during the pilot project at MSFC in the fall of 2001, indicated that a rating of 5 should be given to those systems that did not exist within a particular facility. The thought behind this was that a rating of 5 would contribute zero cost to the deferred maintenance estimate. However, in the review of the MSFC data, we realized that this would actually increase the FCI abnormally, so we added a rating of 0 to account for nonexistent systems vice 5’s. This guidance was disseminated before the first site during the FY02 assessment, but we realized a few weeks into the assessment that some teams were still using 5’s instead of 0’s for nonexistent systems. The new guidance was made clear to everyone, and we attempted to correct the problem in the database. During this year’s analysis we found uncorrected ratings from last year at many of the sites, but especially sites that were assessed early in ’02 including MSFC (the pilot, October 2001), GSFC (the first assessment, June 2002), LaRC, JPL, WSTF, (all in June 2002) and SSC. This change had no effect on any FCI and reduced the NASA DM estimate by $484,000 or 0.02%. Appendix G has a detailed list of these facilities.

4.1.4 Age Related Depreciation

During the FY02 assessment there was inconsistent application of the depreciation of systems for age related factors. This was due to the development of the guidelines while the assessment was underway. In the FY03 assessment the guidance was clear. Assessors were advised to downgrade HVAC and electrical systems by one rating level if systems were 20-30 years old (e.g., installed between 1970-1980). Systems installed prior to 1970 (more than 30 years old) were downgraded two rating levels. For example, if a system appeared to function properly, and by visual inspection required nothing more than normal maintenance (a "5" per criteria) but was on aggregate more than 30 years old, it was rated a "3", rather than a "5". This adjustment accounts for the need to program replacements for these systems. Systems that have been upgraded since the installation date were not reduced.

4.1.5 Change in Assessment of Program Support Equipment

The most difficult and confusing of the nine systems to understand and rate, program support equipment, received the most complete explanation of what and how to assess it in the DM Guidebook. Program Support Equipment (PSE) includes collateral[13] type equipment ***solely*** required to support operations or research within the facility. Special air conditioning, electrical service, pumps, motors, exhaust systems, pressure vessels, piping, hydraulics, or other equipment needed to sustain operations or research is included within PSE. It is rated only in the following DM Facility Categories and only has a system CRV % in those categories:

- 1- R&D & Test Buildings
- 2 - R&D Structures and Facilities
- 3 - Wind Tunnels
- 4 - Engine/Vehicle Static Test Facilities
- 13.1 - Large Antennas
- 13.2 - Small Antennas
- 14 - Mission Control Operations Buildings

For most facilities outside these categories, PSE should receive a zero rating. Special equipment within boiler plants or other infrastructure related facilities is not PSE. For larger antennas, hydraulics, motors, pumps, and other associated equipment in support of the antenna operations should be rated as PSE. This caused very little change the NASA figures. The SCI of PSE

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[13] NASA Policy Guidance (NPG) 8831.2D defines Collateral Equipment as :Encompasses building-type equipment, built-in equipment, and large, substantially affixed equipment/property and is normally acquired and installed as part of a facility project as described below

a. Building-Type Equipment. A term used in connection with facility projects to connote that equipment normally required to make a facility useful and operable. It is built in or affixed to the facility in such a manner that removal would impair the usefulness, safety, or environment of the facility. Such equipment includes elevators; heating, ventilating and air conditioning systems; transformers; compressors; and other like items generally accepted as being an inherent part of a building or structure and essential to its utility. It also includes general building systems and subsystems such as electrical, plumbing, pneumatic, fire protection, and control and monitoring systems.

b. Built-in or Large, Substantially Affixed Equipment. A term used in connection with facility projects of any type other than building-type equipment that is to be built in, affixed to, or installed in real property in such a manner that the installation cost, including special foundations or unique utilities service, or the facility restoration work required after its removal is substantial.

dropped from 4.0 in FY02 to 3.8 in FY03. The DM cost rose by 1.37% from $108.5 million to $109.9 million.

4.2 Significant Changes in FCI and DM Estimates Between Assessments (SOW para. 6.I.3))

The Statement of Work calls for a report on any change in the deferred maintenance cost over 20% per site and a change of over 0.5 in FCI per site. Table 4-1 shows a comparison between FY02 and FY03 with the requisite changes italicized.

Table 4-1. Comparison of DM Estimate ($M) and FCI Between FY02 and FY03

Line Name	FY02 DM	FY03 DM	Delta DM	% Change	FY02 FCI	FY03 FCI	Delta FCI
Ames Research Center	$108.58	$171.30	$62.72	*57.77%*	4.1	4.0	-0.1
Langley Research Center	$288.14	$153.17	-$134.97	*-46.84%*	3.7	3.7	0.0
Ft. Davis Mobile Laser Site	$0.01	$0.08	$0.07	*651.19%*	1.0	1.0	0.0
Hawaii Spaceflight Tracking/Data Network	$1.48	$1.49	$0.01	*0.36%*	3.4	4.2	*0.8*
Ponce De Leon Space Flight Tracking/Data Network	$0.05	$0.02	-$0.03	*-64.19%*	3.7	4.0	0.3
Poker Flats Research Range, Fairbanks, AK	$0.16	$4.28	$4.12	*2576.94%*	4.5	4.4	-0.1
Canberra Deep Space Communications Complex, Australia	$10.10	$4.60	-$5.50	*-54.46%*	3.9	4.3	0.4
Goldstone, Deep Space Communications Complex ,CA	$8.26	$44.51	$36.25	*438.88%*	4.4	4.0	-0.4
Table Mountain Observatory	$0.28	$1.91	$1.63	*583.20%*	3.8	3.1	*-0.7*
Palmdale, NASA Industrial Plant	$0.20	$0.14	-$0.06	*-30.91%*	3.7	3.8	0.1
Palmdale, USAF Industrial Plant	$1.54	$0.99	-$0.55	*-35.62%*	3.6	3.9	0.3
White Sands Test Facility	$7.47	$10.02	$2.55	*34.19%*	3.4	4.0	*0.6*
White Sands 1st TDRSS	$1.16	$2.44	$1.28	*110.65%*	3.7	4.0	0.3
Kennedy Space Center	$485.86	$828.45	$342.59	*70.51%*	3.3	3.3	0.0
Marshall Space Flight Center	$89.22	$124.94	$35.72	*40.03%*	4.1	3.8	-0.3
Brigham City, Utah	$0.04	$0.05	$0.01	*31.41%*	4.2	3.8	-0.4
Michoud Assembly Facility	$75.37	$98.21	$22.84	*30.30%*	3.8	3.4	-0.4
Stennis Space Center	$264.04	$111.12	-$152.92	*-57.92%*	3.1	3.5	0.4
Stennis Space Center Tenants	$17.89	$3.96	-$13.93	*-77.88%*	3.4	3.9	*0.5*

4.2.1 Ames Research Center

Ames had an increase in the DM estimate of $62.72 million or 58% from the FY02 assessment to the FY03 assessment. However, the Ames deferred maintenance for active facilities actually dropped $6.07 million from FY02 to FY03, with the active facilities FCI decreasing by 0.1 from 4.2 to 4.1. The increase is in *inactive* facilities where the DM estimate increased $68.79 million from $38.78 million in FY02 to $107.58 million and the FCI dropped from 3.9 to 3.4. The change is due to the ratings in one mothballed building, N218. With a CRV of $202 million (no exclusions) a change in ratings in a few systems can have a large impact on the DM estimate of a Center. In this case, the structural system (3% system CRV) went from a 5 rating in FY02 to a 4 rating in FY03, the electrical system (15% system CRV) went from a 2 rating to a 1 rating, and the program support equipment system (45% system CRV) dropped from a 4 rating to a 2. This was due to the consideration of more program support equipment as described in paragraph 4.1.3 above.

4.2.2 Langley Research Center

The Langley DM estimate decreased from $288.14 million to $153.17 million, a difference of $134.97 million, or 47% between the FY02 assessment and the FY03 assessment. This change occurred for two reasons. First, during the FY02 assessment Langley was the second site visited. Because of problems encountered with assessing trailers at the first site, guidance was issued to the assessment team telling them to rate trailers no higher than a 2. This gave the trailers at LaRC an artificially low FCI of 2.1 and an artificially high DM cost estimate of $2.2 million because some of the trailers were new and others were in a good, well-maintained condition. This year that guidance was changed to properly reflect the *DM Guidebook* instructions with the FCI for the trailers increasing to 3.4 and the DM estimate decreasing to $306,133. For NASA, the change in FCI for the "Trailer" DM category was from a 2.9 to a 3.3, and the change in the DM cost estimate was down 39% from $8.5 million to $5.2 million.

Second, during the FY02 assessment the age of electrical systems was re-considered after the overall Center assessment was completed. During the FY02 assessment, electrical systems that were aged but still in working order were downgraded only one point. After the visit a re-adjustment was made to those scores so that the cost of upgrades to those facilities having severely aged items would more accurately be reflected. This was done by reviewing the facility's age and then adjusting the scores without actually viewing the facility. A total of 146 LaRC facilities had their electrical scores adjusted using this approach. The criteria as follows were applied:

1980 vintage or later - no downgrade for age
1970-1980 - downgrade 1 level for age (additional levels for condition problems)
1960 -1970 - downgrade 2 levels for age (additional levels for condition)
Predates 1960 - Peg at the "2" level, or lower if systems do not function.

This contrasts to the more accurate evaluation of aged electrical systems made in DM03. Instead of globally grading facility electrical systems, the DM03 assessment graded each electrical system independent of building age. This properly reflected those facilities that had undergone electrical system upgrades while still considering the impact of age on those electrical systems that had not. In 74 cases the electrical scores for LaRC facilities in DM03 were assessed at least 2 ratings higher. This changed the SCI for electricity at LaRC from 2.6 to 3.2; and reduced the electrical system DM from $306 million to $133 million. This explains the $134 million or 47% drop in DM at Langley.

4.2.3 Ft. Davis Mobile Laser Site

Ft. Davis had a DM increase of $70,000 or 651% from FY02 to FY03 for its *inactive* facilities. This is a result of not generating CRVs at this site that were $0 in the NASA RPI during the FY02 assessment.

4.2.4 Hawaii Spaceflight Tracking/Data Network

The Hawaii STDN FCI rose by 0.8 from 3.4 to 4.2. This change was due to the increase in the ratings for facilities number 444, Utilities. This facility was rated as an electrical distribution system (DM category 16) so the emphasis of the system CRV % is in structural system (39%) and the electrical system (58%). In this case the ratings rose in structure from 4 in FY02 to 5 in

FY03, and from 3 to 4 in the electrical system. This lowered the DM cost in the structural system by $23,700 and the cost in the electrical system by $387,500 for a total of $411,200. Because this one facility is approximately 20% of the CRV of the site, its weight has tremendous impact on the numbers for the site, in this case mirroring them.

4.2.5 Ponce de Leon Spaceflight Tracking/Data Network

The Ponce de Leon STDN DM estimate decreased 64% from $50,000 to $20,000, a difference of $30,000. The majority of this change was due to the increase in ratings for the roof and exterior as a result of maintenance on three buildings at Ponce de Leon: 7, the Optics Support Building, 1, the Operations building, and 2, the Power Plant. The change in roof condition alone accounted for $20, 000 of the decrease in DM cost.

4.2.6 Poker Flats Research Range

The Poker Flats site showed a 2577% increase in DM cost from $ 160,000 to $4.28 million a difference of $4.12 million. This is because 43 more buildings were assessed this year than last. These items include a large variety of items, from items as small as a site gate to items as large as 11 meter antenna and an office building.

A review of the current RPI shows only 8 facilities at Poker Flats with a CRV of $5.7 million. During this year's visit the assessor was told that an additional 43 facilities belong to NASA, and they were assessed. Since no record of these facilities existed, CRVs had to be generated (see paragraph 2.5.2) raising the calculated total CRV by $197 million to a total of $202 million. Overall, the site is in good condition, with the FCI, including the new facilities, at 4.4. However, more research needs to be done to establish whether these new 43 buildings belong to NASA, the University of Alaska (which shares the site), or a third party.

4.2.7 Canberra Deep Space Communications Complex

The Canberra DM estimate dropped 54% from $10 million during the FY02 assessment to $4.6 million during the FY03 assessment, a difference of $5.5 million. This change is directly contributable to the exterior work completed over the last year on the antennas, which make up over well over 50% of the sites CRV. This maintenance work lowered the DM value for the exterior system by $5.6 million, and raised the exterior system SCI from 3.2 during the FY02 assessment to 4.4 in FY03.

4.2.8 Goldstone Deep Space Communications Complex

The Goldstone DM estimate increased 439%, from $8.26 million during the FY02 assessment to $44.51 million during the FY03 assessment or a difference of $36.25 million. The DM estimate for the active facilities increased $8.1 million from $4.15 million in FY02 to $12.25 million in FY03, while the inactive facilities increased $28.15 million from $4.11 million in FY02 to $32.26 million in FY03, dropping the inactive FCI by 1.5 from 4.2 to 2.7. The inactive CRV also increased $22.14 million dollars in this time. This increase in DM and CRV was the result of not generating a CRV for 54 facilities that had a CRV of $0 in the NASA RPI at this site for the FY02 assessment.

4.2.9 Table Mountain Observatory

The Table Mountain Observatory DM estimate rose 583% from $280,000 to $1.91 million, a difference of $1.63 million. The FCI decreased from 3.8 in the FY02 assessment to 3.1 in the FY03 assessment. The CRV rose from $5.93 million to $15.2 million. The reason for the increase in both the DM and CRV was the inclusion in the FY03 data of information on facilities TM-Fence, TM-Liquid Nitrogen, and TM-Roads. These facilities are not reflected in the RPI for Table Mountain, and were not included in last year's assessment. Their total CRV is $8.184 million, with a DM estimate of $1.7 million. The FCI for the roads alone is 2. Since the roads are fully 50% of the Table Mountain CRV, they account for the decrease in the FCI.

4.2.10 Palmdale Industrial Plant

The NASA side of Palmdale saw a decrease in the DM estimate from $200,000 to $140,000, or 31% due to a maintenance effort on the roof and exterior of facility 3154, which saw its DM estimate decrease by $40,000 and its FCI increase from 3.5 in the FY02 assessment to 3.9 in the FY03 assessment. On the Air Force side of the plant there was a DM estimate reduction from $1.54 million to $990,000 or 35%. This is generally the result of the increase in ratings of the electrical systems and program support equipment in facility 0150, Shuttle Orbiter Final Assembly Building (CRV, $30M); The DM cost for this facility decreased by $225,000 between FY02 and FY03.

4.2.11 White Sands Test Facility

The White Sands DM estimate increased 34% from $7.47 million in FY02 to $10.02 million in FY03. There are a few reasons for this increase. First, NASA leases two hangers (CRV $8.5M total) at El Paso International Airport that were not assessed in FY02. The DM estimate on those facilities from the FY03 data is $1.2 million. Second, in FY02 the trailers at White Sands were assessed but had no CRV in the database, and none was generated, thus they produced a deferred maintenance cost of 0 in the FY02 assessment. For the FY03 assessment the DM value is $369,000. Third, facility 490, Gantry Crane facility, which is out of service, received a 5 in structural systems in the FY02 assessment but only received a 2 for the FY03 assessment, decreasing its DM estimate by $164,000. It received a 5 in FY02 because it was out of service and the team assumed DM should be zero. Added, these three conditions total a DM value of $2.55 million to the White Sands total, at the same time increasing the FCI from 3.4 in FY02 to 4.0 in FY03.

4.2.12 Tracking and Data Relay Satellite System 1

The TDRSS 1 DM estimate increased 111% from $1.16 million to $2.44 million ($1.28 million difference) between FY02 and FY03. There are three reasons for this: The roof rating of building 001, Operations Building, lowered from a 5 to a 3 for leaking, this increased the DM cost of that facility by $500,000. Again, the CRVs for trailers at TDRSS 1 were not generated, thus no DM estimate was generated. This added $700,000 to the DM estimate. Building 26, a building leased to the Air Force by NASA was not assessed last year. This year it was assessed and generated a DM estimate of $50,000. Added, these costs total $1.25 million or $30,000 difference from the FY02 assessment.

4.2.13 Kennedy Space Center

The Kennedy DM estimate increased from $485 million to $828 million, a difference of $343 million, or 70% between the FY02 assessment and the FY03 assessment. This is accountable in one facility; K6-0848, Vehicle Assembly Building. With a CRV in excess of $800 million, this facility has a great impact on the DM estimate and FCI of not only KSC, NASA as a whole as it is almost 5% of the NASA CRV. Table 9 shows how the ratings changed;

System	FY03 Ratings	FY02 Ratings	FY03 DM	FY02 DM	Difference
Structure	3	4	18,876,525.47	1,887,652.55	16,988,872.92
Roof	2	3	77,222,149.65	39,125,889.16	38,096,260.49
Exterior	3	3	12,870,358.28	12,870,358.28	0
Interior Finishes	3	3	12,870,358.28	12,870,358.28	0
Electric	1	3	171,175,765.06	16,731,465.76	154,444,299.30
HVAC	1	3	114,117,176.71	11,154,310.51	102,962,866.20
Plumbing	3	3	9,438,262.74	9,438,262.74	0
Conveyance	3	3	0.00	0.00	0
Program Support Equipment	3	3	0.00	0.00	0
Total					312,492,298.92

Table 4-2. Vehicle Assembly Building Comparison

The following are the assessors' comments.

Structure: This year's assessment lowered structure from 4 to 3. Neither assessor had specific examples of system conditions driving their assessment to a 3. Their assessment of the structural system could have gone either way; they chose 3 to be conservative.

Roof: This year's assessment lowered from 3 to 2. They felt that the assessment of 2 is completely in keeping with the rating definitions provided by NASA, and feel that giving the roof system a 3 would **not** be appropriate. The roof is covered approximately 20% with patches and continually leaks. Projects to replace the roof have been in the works for years, but have not been fulfilled. Sub-roofing was installed to catch spalling concrete from the roof's interior surface, thus preventing orbitor damage/destruction or personnel injury/death. This roof met all definition requirements for a 2 rating.

Electric and HVAC: Both of these systems lowered from 3 to 1. Both of these systems are mostly original equipment (1964). Their initial rating was 3, which was then lowered to 1 based on 2003 DM model guidance for systems more than 30 years old being rated an additional two points lower.

4.2.14 Marshall Space Flight Center

As the pilot project in October of 2001, the Marshall DM estimate increased from $89 million in the FY02 assessment to $125 million during the FY03 assessment, or a 40% increase. Although many of the updated guidelines (see paragraph 4.1) were retrofitted to the Marshall data, one that was not was the downgrade for age related systems as explained in paragraph 4.2.14 above. A review of the data shows that nearly 40% of the electrical systems were rated lower in the FY03 assessment than in the FY02 assessment, and nearly 38% of the HVAC systems were rated lower. The majority of the reductions are contributable to age. This change caused an increase

in the electrical system DM estimate of $14.87 million and an increase in the DM estimate for the HVAC system of $5.29 million for a total increase of $20.16 million. Exterior system also had an increase in its DM estimate, $9.77 million and a .5 reduction in the SCI. This change was largely due the ratings change on 3 facilities; For 4200, Office Building, the exterior system ratings went from 4 in the FY02 assessment to 2 in the FY03 assessment accounting for $2.4 million; 4481, Space Science Laboratory, the ratings went from a 3 to a 2 accounting for $3.3 million; 4550, Micro Gravity Drop Tower, the ratings went from a 4 to a 3 accounting for $840,000 dollars. This totals $6.5 million of the $9.8 million difference in exterior between FY02 and FY03.

4.1.15 Michoud Assembly Facility

The DM estimate at the Michoud increased from $75 million to $98 million for an increase of $23 million or 30%. This is the result of the reduction of facility 103's, Manufacturing Building, (CRV, $325 million) FCI from 4.1 to 3.3 due to a lowering of its ratings across the board Building 103 so dominates the CRV at Michoud that it virtually becomes the FCI for the site, thus, the FCI for 103 being 3.4 and the FCI for the site being 3.4. The lowering of the structural system rating from a 4 to 3 in 103 caused the SCI of all of Michoud to decrease by 0.7.

4.2.16 Brigham City, Utah

The DM estimate at the Brigham City facility increased from $40,000 to $50,000 for an increase of $10,000 or 31% and dropped the FCI from 4.2 to 3.8. Overall, the two garages are in good condition. There were two impacts on the change in DM estimate and the change in SCI. First, the electrical and HVAC were downgraded from a 4 to a 3 rating in both facilities in FY03 due to age considerations. This accounts for the $10,000 difference in DM cost. Second, maintenance on the exterior and interior systems of building 002 increased both ratings from a 3 to a 4 increasing the SCI for both systems by 0.5.

4.2.17 Stennis Space Center

The DM estimate at Stennis decreased from $264 million to $111 million, a difference of $153 million and a change of 58%. This change lies in the ratings increase for the six facilities with the highest CRV at Stennis: 4110, A Complex Control Center (CRV – $48 million), 4120, Test Stand A-1 ($125 million), 4122, Test Stand A-2 ($138 million), 4210, B Complex Control Center ($51 million), 4120, Test Stand B-1 ($180 million), 4121, and Test Stand B-2 ($111 million). The DM estimate on these facilities decreased $150 million of the $153 million decrease. The change in ratings was generally due to an enhanced corrosion control effort which raised the SCI of the exterior by 0.6, a maintenance effort in the electrical system that raised its SCI by 0.8, a maintenance effort in the HVAC system that raised its SCI by 0.5, and through the clarification of instruction on program support equipment, its SCI went up by 1.1.

4.2.18 Stennis Space Center Tenants

The DM estimate for the Stennis Tenants decreased from $17.89 million to $3.96 million, a difference of $13.93 million, or a change of 78%. Five facilities are the major contributors; 44, Flow Basin/Flood Plain ($3.6 million CRV), 1003, Navy Computer Program Operations ($9.7 million), 1000, Data Handling Center ($25.6 million), 3203, Oceanographic Building ($30.4 million), and 3204, National Data Buoy Storage Facility ($9.7 million). These five buildings account for a total of the $13 million decrease in estimated DM between '02's and '03's analysis.

The major contributors to these increases were generally same as a Stennis proper. The exterior's SCI improved 0.3 due to corrosion control and general maintenance, the electrical system's SCI improved 0.8 through maintenance, and the HVAC system's SCI improved 0.6. Maintenance on the structural system of facility 44, Flow Basin/ Flood Plane directly resulted in the increase of the structural system SCI rising by 0.5.

4.3 Comparison Results, Conclusions, and Recommendations

4.3.1 Results

- The DM estimate for the Agency increased from $2.03 billion in the FY02 assessment to $2.27 billion in the FY03 assessment, an increase of 12%.[14] (including a 1.85% increase for the ENR inflation factor).
    - The DM estimate for the Agency active sites increased from $1.64 billion to $1.78 billion, a difference of $.14 billion, or an increase of 8% (including a 1.85% increase for the ENR inflation factor).
    - The DM estimate for the Agency inactive sites increased from $.39 billion to $.49 billion, a difference of $.10 billion, or an increase of 26% (including a 1.85% increase for the ENR inflation factor).
    - The DM estimate Scientific and R&D facilities decreased from $1.12 billion in FY02 to $1.01 bllion in FY03.
    - The DM estimate Mission Operations facilities facilities decreased from $213 million in FY02 to $187 million in FY03.
    - The DM estimate for Shuttle Related Facilities increased from $687 million to $945 million as a result of the increase in DM for the VAB.
    - Low value and remote sites total DM rose from $28 million in FY02 to $29 million in FY03.
    - There are 34 facilities with a CRV over $100 million. They are 28% of the NASA CRV and 44% of the FY03 deferred maintenance estimate.
- The Agency FCI remained the same at 3.6.
    - Active sites remained at 3.7 from the FY02 assessment to the FY03 assessment.[15]
    - Inactive sites dropped from 3.4 to 3.2 from the FY02 assessment to the FY03 assessment.
    - Scientific and R&D facilities remained constant at 3.7
    - Mission Operations facilities went up from 3.7 in FY02 to 3.9 in FY03
    - Shuttle Related Facilities remained constant at 3.4
    - Low value and remote sites remained constant at 2.0 for the total. Active sites remained constant at 3.8 and inactive sites remained constant at 1.0.
- A change in the DM estimate for the systems was only evident in the electrical system, which increased $0.6 billion.
- The SCIs for Roof and HVAC each decreased from the FY02 assessment 0.1 to 3.5 and 3.4 respectfully during the FY03 assessment. The SCI for Program Support Equipment decreased 0.2 to 3.8. Exterior, Interior Finishes, Electrical, Plumbing, and Conveyance

[14] All DM numbers include the FY03 Engineer News Record (ENR) inflation factor of a 1.85% increase.

[15] In the FY02 report the method of calculating active, inactive and SCI was different as discussed earlier. For the purposes of this comparison, the FY02 data was recalculated using this year's weighted method.

remain the same. The SCI for structure increased 0.1 to 3.8. These numbers include both active and inactive facilities.

- For the second year the DM estimate for the electrical system is almost two times as much as the next highest system.
- Of the 18 sites with significant differences in DM estimates and FCI, as defined in the SOW; 12 had significant changes due to ratings changes in no more than four facilities, or one system; three had CRV that were not generated on inactive facilities in the FY02 assessment; four were low density sites where the change in a single facility could greatly impact the DM estimate or the FCI for a facility; and at five facilities the decrease in the DM estimate and the increase the FCI was *directly attributable to a specific maintenance effort*.
- These 18 sites had little effect on Agency totals, but did impact the numbers at the Center level.
- An increase in the inactive CRV of $0.01 billion due to the more accurate generation of those CRVs increased the inactive DM by $0.10 billion.
- The difference between the FY02 BMAR results and the FY03 DM results compare favorably to the difference between FY 01 BMAR results and the FY02 DM results.

Table 4-3. Comparison Between FY02 and FY03 Assessments (continued next page)

Line Name	FY02 DM	FY03 DM	Delta DM	% Change	FY02 FCI	FY03 FCI	Delta FCI
Ames Research Center	$108.58	$171.30	$62.72	57.77%	4.1	4.0	-0.1
Crows Landing	$12.29	$11.33	-$0.96	-7.84%	2.9	3.0	0.1
Camp Parks	$0.55	$0.57	$0.02	3.38%	3.5	3.5	0.0
Moffet Federal Airfield	$108.62	$119.87	$11.25	10.36%	3.3	3.2	-0.1
Ames Research Center Total	$230.05	$303.07	$73.02	31.74%	3.8	3.7	-0.1
Dryden Flight Research Center	$8.32	$7.42	-$0.90	-10.78%	4.1	4.2	0.1
Dryden Flight Research Center Total	$8.32	$7.42	-$0.90	-10.78%	4.1	4.2	0.1
Glenn Research Center	$122.13	$147.94	$25.81	21.14%	3.7	3.6	-0.1
Plum Brook Station	$148.49	$144.17	-$4.32	-2.91%	3.3	3.4	0.1
Glenn Research Center Total	$270.62	$292.12	$21.50	7.94%	3.6	3.6	0.0
Langley Research Center	$288.14	$153.17	-$134.97	-46.84%	3.7	3.7	0.0
Langley Research Center Total	$288.14	$153.17	-$134.97	-46.84%	3.7	3.7	0.0
Code R (Aerospace Research)	**$797.12**	**$755.78**	**-$41.34**	**-5.19%**	**3.7**	**3.7**	**0.0**
Goddard Space Flight Center	$37.59	$31.37	-$6.22	-16.55%	4.1	4.1	0.0
American Samoa Bilateral Ranging Transponder Fac	$0.00	$0.00	$0.00	0.00%	4	4.0	0.0
Ascension Bilateral Ranging Transponder Fac	$0.00	$0.00	$0.00	0.00%	4	4.0	0.0
Bilateral Ranging Transponder Total	$0.00	$0.00	$0.00	0.00%	4	4.0	0.0
Bear Lake Mobile Laser Site	$0.21	$0.21	$0.00	1.36%	1	1.0	0.0
Bermuda Mobile Laser Site	$0.23	$0.23	$0.00	0.80%	1	1.0	0.0
Easter Island Mobile Laser Site	$0.00	$0.00	$0.00	0.00%	3.9	3.9	0.0
Ft. Davis Mobile Laser Site	$0.00	$0.08	$0.08	0.00%	1	1.0	0.0
Haystack Mobile Laser Site	$0.01	$0.01	$0.00	-5.78%	3	3.0	0.0
Hawaii Kauai Mobile Laser Site	$0.00	$0.00	$0.00	0.00%	4	4.0	0.0
Hawaii Maui Mobile Laser Site	$0.00	$0.00	$0.00	0.00%	3	3.0	0.0
Kwajalein Mobile Laser Site	$0.13	$0.14	$0.01	5.15%	1	1.0	0.0

Line Name	FY02 DM	FY03 DM	Delta DM	% Change	FY02 FCI	FY03 FCI	Delta FCI
Monument Peak Mobile Laser Site	$0.00	$0.00	$0.00	0.00%	4	4.0	0.0
Oak Mountain Mobile Laser Site	$0.16	$0.17	$0.01	4.58%	1	1.0	0.0
Otay Mountain Mobile Laser Site	$0.28	$0.28	$0.00	1.21%	1	1.0	0.0
Owens Valley Mobile Laser Site	$0.09	$0.10	$0.01	6.06%	1	1.0	0.0
Platteville Mobile Laser Site	$0.17	$0.17	$0.00	1.36%	1	1.0	0.0
Quincy Mobile Laser Site	$0.01	$0.01	$0.00	-48.08%	4	4.0	0.0
Tahiti Mobile Laser Site	$0.03	$0.03	$0.00	-4.81%	1	1.0	0.0
Yarragadee Mobile Laser Site	$0.01	$0.01	$0.00	-32.31%	4	4.0	0.0
Mobile Laser Site Total	$1.34	$1.44	$0.10	7.17%	2.7	2.6	-0.1
Bermuda Spaceflight Tracking/Data Network	$26.86	$27.36	$0.50	1.87%	1	1.0	0.0
Hawaii Spaceflight Tracking/Data Network (STDN)	$1.48	$1.49	$0.01	0.36%	3.4	4.2	0.8
Ponce De Leon Space Flight Tracking/Data Network (STDN)	$0.05	$0.02	-$0.03	-64.19%	3.7	4.0	0.3
Spaceflight Tracking/Data Network Total	$28.39	$28.87	$0.48	1.68%	2.1	3.0	0.9
Yarragadee Space Transportation System Facility	$0.02	$0.02	$0.00	20.77%	1	1.0	0.0
Space Transportation System Total	$0.02	$0.02	$0.00	20.77%	1	1.0	0.0
Cabo San Lucas Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	0.00%	1	1.0	0.0
Cerro Tololo Verylong Baseline Interferometry Site	$0.02	$0.02	$0.00	-20.68%	1	1.0	0.0
Ensenada Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	0.00%	1	1.0	0.0
Iquique Verylong Baseline Interferometry Site	$0.01	$0.01	$0.00	-8.98%	1	1.0	0.0
Mazatlan Verylong Baseline Interferometry Site	$0.08	$0.06	-$0.02	-20.09%	1	1.0	0.0
Point Arguello Verylong Baseline Interferometry Site	$0.04	$0.04	$0.00	4.28%	1	1.0	0.0
Santiago Verylong Baseline Interferometry Site	$0.00	$0.00	$0.00	0.00%	4	4.0	0.0
Soccorro Island Verylong Baseline Interferometry	$0.00	$0.00	$0.00	0.00%	1	1.0	0.0
Verylong Baseline Interferometry Total	$0.16	$0.14	-$0.02	-11.73%	1.3	1.3	0.0
Wallops Flight Facility	$27.36	$25.12	-$2.24	-8.17%	3.9	3.9	0.0
National Balloon Facility, Palestine, TX	$0.04	$0.04	$0.00	11.47%	4.7	4.7	0.0
Poker Flats Research Range, Fairbanks, AK	$0.16	$4.28	$4.12	2576.94%	4.5	4.4	-0.1
Wallops Flight Facility Total	$27.56	$29.45	$1.89	6.86%	3.9	4.1	0.2
Goddard Space Flight Center Total	$95.06	$91.29	-$3.77	-3.97%	3.9	4.1	0.2
Code Y (Earth Science)	**$95.06**	**$91.29**	**-$3.77**	**-3.97%**	**3.9**	**4.1**	**0.2**
Jet Propulsion Laboratory	$22.62	$26.97	$4.35	19.25%	4.1	4.0	-0.1
Canberra Deep Space Communications Complex, Australia	$10.10	$4.60	-$5.50	-54.46%	3.9	4.3	0.4
Goldstone, Deep Space Communications Complex ,CA	$8.26	$44.51	$36.25	438.88%	4.4	4.0	-0.4
Madrid Deep Space Communications Complex, Spain	$9.77	$8.35	-$1.42	-14.56%	3.6	3.6	0.0
Deep Space Network Total	$28.13	$57.46	$29.33	104.26%	4.1	4.0	-0.1
Table Mountain Observatory	$0.28	$1.91	$1.63	583.20%	3.8	3.1	-0.7
Jet Propulsion Laboratory Total	$51.03	$86.35	$35.32	69.21%	4.1	4.0	-0.1
Code S (Astrobiology and Space Research/ Science)	**$51.03**	**$86.35**	**$35.32**	**69.21%**	**4.1**	**4.0**	**-0.1**

Line Name	FY02 DM	FY03 DM	Delta DM	% Change	FY02 FCI	FY03 FCI	Delta FCI
Johnson Space Center	$102.69	$114.99	$12.30	11.97%	3.5	3.5	0.0
Ellington Field	$6.19	$6.00	-$0.19	-3.07%	3.8	3.6	-0.2
Palmdale, NASA Industrial Plant	$0.20	$0.14	-$0.06	-30.91%	3.7	3.8	0.1
Palmdale, USAF Industrial Plant	$1.54	$0.99	-$0.55	-35.62%	3.6	3.9	0.3
Palmdale Industrial Plant Total	$1.74	$1.13	-$0.61	-35.08%	3.6	3.9	0.3
Downey, NASA Industrial Plant		0		0.00%			
White Sands Test Facility	$7.47	$10.02	$2.55	34.19%	3.4	4.0	0.6
WSTF Space Harbor	$0.42	$0.49	$0.07	15.99%	3.7	3.8	0.1
White Sands 1st TDRSS	$1.16	$2.44	$1.28	110.65%	3.7	4.0	0.3
White Sands 2nd TDRSS	$1.17	$1.26	$0.09	7.69%	4	4.0	0.0
White Sands Test Facility Total	$10.23	$14.21	$3.98	38.95%	3.5	4.0	0.5
Johnson Space Center Total	$120.85	$136.33	$15.48	12.81%	3.5	3.6	0.1
Kennedy Space Center	$485.86	$828.45	$342.59	70.51%	3.3	3.3	0.0
Cape Canaveral Air Force Station	$20.31	$21.34	$1.03	5.05%	3.3	3.7	0.4
Gambia	$0.30	$0.31	$0.01	3.46%	3.8	3.8	0.0
Morocco	$0.03	$0.03	$0.00	7.08%	4	4.0	0.0
Transoceanic Abort Landing Sites Total	$0.34	$0.34	$0.00	0.74%	3.8	3.8	0.0
Kennedy Space Center Total	$506.50	$850.13	$343.63	67.84%	3.3	3.3	0.0
Marshall Space Flight Center	$89.23	$124.94	$35.71	40.02%	4.1	3.8	-0.3
Brigham City, Utah	$0.04	$0.05	$0.01	31.41%	4.2	3.8	-0.4
Michoud Assembly Facility	$75.37	$98.21	$22.84	30.30%	3.8	3.4	-0.4
Santa Susanna Field Laboratory	$9.10	$10.30	$1.20	13.20%	3.4	3.4	0.0
Marshall Space Flight Center Total	$173.74	$233.50	$59.76	34.40%	3.9	3.6	-0.3
Stennis Space Center	$264.04	$111.12	-$152.92	-57.92%	3.1	3.5	0.4
Stennis Space Center Tenants	$17.89	$3.96	-$13.93	-77.88%	3.4	3.9	0.5
Stennis Space Center Total	$281.92	$115.08	-$166.84	-59.18%	3.1	3.5	0.4
Code M (Human Exploration and Development of Space)	**$1,083.02**	**$1,335.03**	**$252.01**	**23.27%**	**3.5**	**3.5**	**0.0**
NASA Total	**$2,026.23**	**$2,268.44**	**$242.21**	**11.95%**	**3.6**	**3.6**	**0.0**

Table 4-3. Comparison between FY02 and FY03 Assessments

4.3.2 Conclusions

- The FY02 assessment provided the information required by NASA for budgeting and programming purposes as required, however the FY03 assessment is a much refined and higher quality assessment than FY02 assessment.
- The cost of DM is still outpacing inflation
- The increase in the DM estimate for electrical systems between FY02 and FY03 is partially attributable to the clarification of guidance on the reduction of ratings for age related reasons.
- Neither the Agency's key scientific (R&D) facilities nor its mission operations facilities showed any improvement in condition.
- Generation of FY03 CRVs for unknown facilities was far more sophisticated and complete than in FY02. In cases where the sites had many CRVs generated, a difference

was created between the CRV values from FY03 and FY02, causing DM estimates to differ at the Center level but not at the Agency level. This is especially true for inactive facilities and accounts for the lowering of the FCI in the inactive facilities.

- The refinements in the model, such as the new method for calculating FCI and SCI for active and inactive facilities, adjustments for nonexistent systems, clarification of age related ratings and the rating of program support equipment for FY03 had little unexplainable impact on the DM estimate or the FCI.
- The difference in SCIs for Program Support Equipment was attributable to the clarification of guidance. The difference in SCI for Structure is attributable to the change in Structure rating a several large facilities. (VAB, Stennis test stands, Michoud Maintenance Building.)
- In facilities or systems with a CRV of over $100 million, or where they are a large percentage of a facility's CRV, (i.e. VAB, ARC wind tunnel, SSC test stands, etc.) a single rating change can change the DM estimate or the FCI for an the entire site. For example the VAB with a CRV in excess of $800 million (18% of the Kennedy CRV) this facility not only has a great impact on the DM estimate and FCI of Kennedy, but as almost 5% of the NASA CRV, it has an impact on the DM estimate and the FCI of NASA as a whole. Appendix K compares the Centers' DM estimate and FCI with and without the facilities with a CRV of over $100 million.

4.3.3 Recommendations

- The Agency should address its critical weakness, its aging electrical system, by seeking special funding outside the normal budgeting process.
- The Agency should centralize some of the maintenance funding of critical systems and facilities.
- The Agency should seek relief from the cost of maintaining some of its $2 billion worth of inactive facilities (DM value $.49 billion) through an active demolition program or other methods of facility disposal.
- The FY03 assessment should be used as the baseline for any further trend analysis or comparison.
- NASA should evaluate the mission criticality of the systems of all facilities with a CRV over $100 million to determine a priority of repair, especially for the VAB. This should be followed by a detailed engineering analysis of the condition of these buildings, especially the VAB, for budgeting and design. Then those repairs should be programmed and budgeted.
- NASA should develop a photographic journal for all the facilities over $100 million to record and demonstrate the condition of these facilities.

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APPENDIX A. THE NASA DM METHOD

A.1 INTRODUCTION

The NASA Deferred Maintenance (DM) Parametric Estimating Method was adopted in August 2001. NASA commissioned a pilot of the DM method at Marshall Space Flight Center (MSFC) in late 2001. Three two-person teams completed the MSFC assessments. The analysis from that test resulted in minor adjustments to the method. During the full assessment, the DM method was further refined as the data from various inspections was analyzed.

A.2 THE THEORETICAL MODEL

This process of documenting deferred maintenance is designed to be a simplified approach based on existing empirical data. The method assumes that:

- condition assessments are performed at the system level rather than the component level;
- simple condition levels are used;
- there are a limited number of systems to assess; and
- the current replacement values (CRV) of the systems and the facility they support are available.

To perform the deferred maintenance estimate a parametric cost estimate model similar to Figure A-1 is used. This is a model that uses cost estimating relationships (CERs) based on existing engineering data and associated algorithms to establish cost estimates. For example, detailed cost estimates for the repair of a building system (i.e., its plumbing system) can be developed using very precise work measurement standards. However, if history has demonstrated that repairs have normally cost about 25% of the original value, then a detailed estimate need not be performed and can simply be computed at the 25% (CER) level. It is important, though, that any CERs used be carefully tested for validity using standard statistical approaches.

Parametric techniques focus on the cost drivers, not the miscellaneous details. The drivers are the controllable system design or planning characteristics, and have a predominant effect on system cost. This technique uses the few important parameters that have the most significant cost impact on the product being estimated, in this case the deferred maintenance of systems within a facility.

A.2.1 Establish Deferred Maintenance Facility Category Codes

The first steps in the process are to determine the facilities to be assessed, and to group them by categories. The category codes group facilities whose systems are similar and have the approximate relative system CRV percentage values. For example, one category may be administrative buildings. These are facilities that function like office buildings, and have a structure, a roof, an exterior, interior finishes and typical mechanical systems (HVAC, electrical and plumbing). Another category may be laboratories. Laboratories have the same systems as an administrative building, with structure, roof, exterior, interior finishes and mechanical systems. But their percent contribution to the CRV will be different, so these building types need to be separate in the model. Other facilities may include antennas, fueling stations, and other structures that have correspondingly different cost models for purposes of estimating DM.

Correct mapping of like facilities is essential to ensuring that all systems contributions to the CRV, and thus the DM, are accounted for.

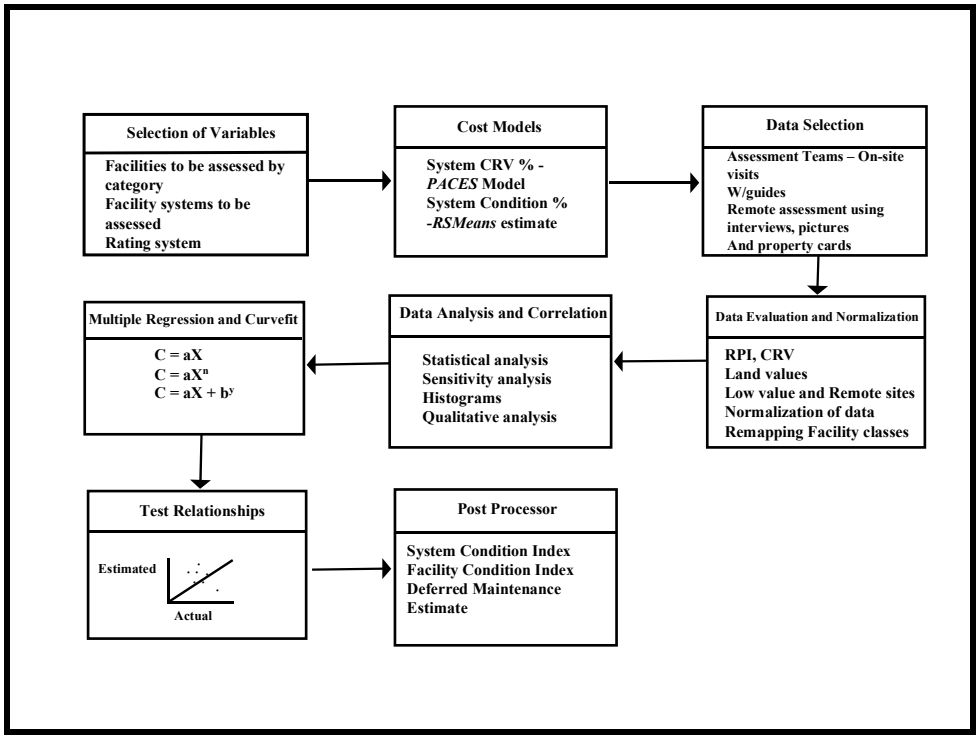

Figure A-1. Theoretical Model for Parametric Estimates

A.2.2 Determine Facility Systems to be Assessed

Once the facilities are categorized, the facility systems to be assessed are identified by using building system classification. An example of such a system is the American Society for Testing of Materials (ASTM) UNIFORMAT II Classification for Building Elements. The system includes, but is not limited to structure, roof, exterior, interior finishes, and mechanical systems.

A.2.3 Determine System CRV Percentages

Each system is then assigned representative cost factors based on the estimated percent contribution of the major system to total CRV of the facility within a facility category. For example, in a simple administrative building the structure may contribute 35% to the CRV, the roof 15%, the exterior 10%, the interior 10% and the mechanical systems 30%; all contributing to equal 100% of the CRV. In complex laboratory and testing facilities, electrical systems make up a larger percentage of the overall building cost; so the breakdown might be structure 25%, roof 15%, exterior 10%, interior 10% and the mechanical systems 40%. The system CRV percentages are derived from existing engineering data and adjusted, if necessary, to meet unique facility types.

A.2.4 Establish Condition Assessment Rating Scheme

A condition rating scheme must be established. Rating schemes can range from very simple to very complex. NASA chose a simple 5-tiered condition code system.

Condition Assessment Level

- **5: Excellent.** Only normal scheduled maintenance required.
- **4: Good.** Some minor repairs needed. System normally functions as intended.
- **3: Fair**. More minor repairs and some infrequent larger repair required. System occasionally unable to function as intended.
- **2: Poor.** Significant repairs required. Excessive wear and tear clearly visible. Obsolete. System not fully functional as intended. Repair parts not easily obtainable. Does not meet all codes.
- **1: Bad.** Major repair or replacement required to restore function. Unsafe to use.

A.2.5 Determine System Condition CRV Percentage

A significant component of the DM estimate is the application of a system condition CRV percentage based on the assigned condition rating for each system. The system condition CRV percentages, based on existing engineering data, increase as the condition of the system gets lower ratings, creating a larger DM estimate. For example, (using the condition assessments above) if the structure of a facility receives a 5 rating its contribution to DM is 0% because there is typically no deferred maintenance for this rating. However, if the structure received a 3 rating its contribution to the deferred maintenance will be 27% of the CRV of the building. The system condition percentages also vary by system. Continuing with the example, in the same building, a 3 rating for the electrical system may contribute 10% of the CRV, or the plumbing system may contribute 27% of the CRV.

A.2.6 Facility Condition Index Calculations

After the condition rating scheme was established, teams went to the field to assess the facilities using the rating system above. The teams rated each system in each facility and entered that information into the database from which is generated a System Condition Index (SCI) for each system, and a Facility Condition Index (FCI) for each facility, site, and the Agency as a whole. SCI is calculated by first determining the CRV of the system in question by multiplying the facility CRV by the % system CRV. The value of these system CRVs are then totaled. Next, the system CRV for each facility is normalized or weighted by dividing the system CRV by the sum of all the system CRVs. This quotient is then multiplied by its respective assessment rating. These "weighted" SCI are then added together to determine the facilities SCI. The SCI calculation can be calculated for the site, installation, Center, Enterprise, or Agency levels.

The FCI is the CRV normalized sum of the condition ratings for each system within each facility. The building FCI is a simple calculation that weights each of the nine system condition ratings by its associated system CRV percentage per DM category. In each system, the rating is multiplied by its system CRV percentage to get a weighted SCI. The sum of the nine weighted SCIs equals the facility's FCI. Table A-1 is an example.

		STRUC		EXT		ROOF		HVAC		ELEC		PLUMB		CONV		INTF		EQUIP		FCI
Facility Description	**Facility CRV $**	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	
WAREHOUSE	1,172,019	4	0.40	3	0.19	2	0.06	0	0.18	3	0.20	0	0.02	0	0	3	0.15	0	0	**3.3**
COVERED STORAGE	102,267	5	0.63	5	0.22	5	0.11	0	0.03	5	0.04	0	0.01	0	0	0	0.04	0	0	**5**
FEMA EQUIPMENT STORAGE SHED	92,789	5	0.48	5	0.17	5	0.05	0	0.15	5	0.15	0	0.15	0	0	5	0.15	0	0	**5**
GENERAL WAREHOUSE	7,781,631	4	0.60	4	0.15	4	0.10	3	0.04	3	0.06	4	0.01	0	0	4	0.04	0	0	**3.9**
ADMINISTRATION BUILDING	12,166,903	5	0.19	5	0.17	3	0.06	4	0.16	4	0.18	4	0.05	5	0.03	5	0.16	0	0	**4.4**
AUDITORIUM	6,306,944	3	0.22	4	0.17	4	0.06	4	0.16	2	0.18	4	0.05	0	0.03	2	0.16	0	0	**3.1**
MAIN LIBRARY	5,716,090	5	0.19	4	0.17	4	0.06	4	0.16	4	0.18	4	0.05	4	0.03	4	0.16	0	0	**4.2**
PHOTOTECHNOLOGY LAB.	10,960,633	4	0.18	3	0.19	4	0.04	3	0.15	4	0.20	4	0.04	5	0.01	5	0.15	5	0.04	**3.9**

Table A-1. Facility FCI Example

Table A-2 is an example of an FCI for a Center. The Center FCI value is a sum of each facility's CRV normalized FCI. Each facility CRV is divided by the total Center CRV. That quotient is then multiplied by each facility's FCI producing a CRV normalized FCI. (Weighted FCI = (Facility CRV÷ Center CRV) × Facility FCI). The sum of these weighted facility FCIs provides a total Center FCI.

Center "A"		**Facility FCI**	**Weighted FCI**
Facility Description	**Facility CRV $**		
WAREHOUSE	1,172,019.00	3.3	0.1
COVERED STORAGE	102,267.00	5.0	0.0
FEMA EQUIPMENT STORAGE SHED	92,789.00	5.0	0.0
GENERAL WAREHOUSE	7,781,631.00	3.9	0.7
ADMINISTRATION BUILDING	12,166,903.00	4.5	1.2
AUDITORIUM	6,306,944.00	3.1	0.4
MAIN LIBRARY	5,716,090.00	4.2	0.5
PHOTOTECHNOLOGY LAB.	10,960,633.00	3.9	1.0
Center "A" Totals	**44,299,276.00**		**3.9**

Table A-2. Center FCI Example

A.2.7 Deferred Maintenance Calculation

The facility DM estimate is determined by adding the deferred maintenance estimates of the nine facility systems. Table A-3 provides a sample deferred maintenance estimate for an administrative facility (DM category 5) with a CRV of $10 million.

System	System %	CRV Total $	System Rating	System Condition CRV %	DM $
Structure	0.18	1,800,000	5	0.00	0
Exterior	0.17	1,700,000	4	0.05	85,000
Roofing	0.05	500,000	4	0.05	25,000
HVAC	0.16	1,600,000	3	0.15	240,000
Electrical	0.18	1,800,000	4	0.05	90,000
Plumbing	0.05	500,000	3	0.15	75,000
Conveying	0.06	600,000	5	0.00	0
Interior Finishes	0.15	1,500,000	3	0.20	300,000
Facility Equipment	0.00	0	0	0.00	0
Total	**1.00**	**10,000,000**			**$815,000**

Table A-3. Sample Deferred Maintenance Calculation

A.3 THE MODEL AS USED

A.3.1 Deferred Maintenance Facility Category Codes

Using the NASA real property inventory (RPI), the first step in building the DM database was to map each of the over 400 NASA facility classes into 42 Deferred Maintenance Facility Categories, as shown in Table A-4. It was necessary to reduce the number of NASA classes to simplify data management. It is important to develop the correct facility category to provide more complete reflection of the system CRV percentages in the different facility types, ultimately creating a more representative DM cost. The categories were determined based on facility similarity. For example, deferred maintenance category 12, Communication and Tracking Buildings, includes NASA facility classes 131 and 140. Category 13, Communications and Tracking Facilities, includes NASA facility classes 132 and 141. These facilities may include antennas, fueling stations, or other structures that have correspondingly different cost models for purposes of estimating deferred maintenance from those in category 12.

Table A-4 Mapping of NASA facility classes into DM class(continued next page)

DM CAT	Facility Type	NASA Facility Category Class
1	R&D and Test Buildings	610-20, 10, 442-30, 10, 423-90, 381-20, 345-10, 330-40, 20, 10, 310-60, 50, 41, 40, 30, 22, 21, 20, 15, 10, 220-14, 13, 12, 11, 10, 219-11, 10, 140-90, 10, 131-25.
2	R&D Structures and Facilities	461-90, 390-00, 381-30, 330-20, 320-60, 50, 41, 40, 30, 22, 21, 20, 10, 310-40, 22
3	Wind Tunnels	331-60, 40, 30, 20, 10, 330-70, 60, 40, 30, 20, 10
4	Engine/Vehicle Static Test Facilities	355-50, 40, 10, 350-20, 10, 345-20, 10, 340-20, 10, 310-22, 141-50
5	Administrative Buildings	140-20, 610-90, 20, 10, 381-30, 20, 310-40, 22, 10, 219-11, 140-40, 30, 20, 10, 131-90.
6	Training Buildings	610-90, 219-11, 179-00, 171-00, 140-20
7	Trailers	812-90, 712-00, 631-30, 20, 630-37, 36, 34, 32, 31, 30, 610-10, 212-10
8	Storage Buildings	740-95, 90, 730-65, 610-90, 30, 510-00, 452-10, 442-90, 50, 30, 10, 423-10, 381-20, 331-60, 40, 20, 310-30, 22, 10, 219-11, 10, 212-20, 153-90, 10, 141-40, 140-90, 50, 40

DM CAT	Facility Type	**NASA Facility Category Class**
9	Storage Facilities	841-45, 833-90, 823-20, 730-65, 690-90, 610-30, 461-10, 452-12, 11, 10, 442-90, 60, 50, 40, 30, 20, 10, 432-90, 10, 423-90, 10, 421-30, 411-90, 381-20, 355-20, 345-20, 331-20, 310-22, 20, 220-10, 153-90, 141-30, 140-90, 50, 40, 131-90, 126-10, 123-90
10	Fuel Storage Tanks	461-90, 30, 20, 10, 423-90, 10, 411-90, 60, 50, 40, 30, 20, 390-00, 320-41, 141-40, 126-90,
10.1	Specialized Liquid Storage Tanks	424-30
11	Magazines	442-40, 30, 424-30, 20, 10, 423-90, 422-90, 30, 20, 15, 421-90, 310-21
12	Communication and Tracking Buildings	442-10, 141-50, 140-90, 50, 40, 20, 10, 132-10, 131-90, 50, 45, 40, 35, 20, 15, 10
13	Communication and Tracking Facilities	390-00, 382-70, 320-60, 141-90, 50, 40, 30, 140-10, 132-90, 50, 30, 10, 131-90
13.1	Large Antennas	141-30
13.2	Small Antennas	390-00, 320-60, 141-90, 30, 132-90, 30, 20, 10, 131-10
14	Mission Control Operations Buildings	610-90, 10, 381-10, 310-60, 140-10, 131-90, 20, 15
15	Lighting	872-90, 10, 812-90, 812-80, 70, 50, 40, 20, 345-50, 136-90, 50, 30,20,10, 132-90
16	Electrical Distribution System	821-50, 812-90, 35, 30, 10, 811-80, 610-90, 423-90, 390-00, 382-70, 355-30, 141-40, 30, 136-90, 132-90
16.1	Power Generation/Power Plant	821-30, 811-90, 80, 60, 40, 10, 442-10, 310-50, 219-10, 141-90, 140-90, 50, 40, 30, 131-90
16.2	Electric Substations, Switchgear & Transformer Yards	890-55, 812-60, 30,10, 811-90, 80, 381-50, 219-11, 10, 141-40, 140-90, 136-90, 132-10, 131-90
17	HVAC Distribution	890-85, 70, 60, 40, 30, 25, 871-90, 842-30, 10, 824-10, 822-20, 812-30, 423-20, 355-50, 141-40
17.1	HVAC Generation	890-80, 75, 55, 40, 842-12, 841-10, 824-30, 821-50, 30, 20, 812-10, 730-90, 25, 345-40, 331-40, 320-22, 310-50, 22, 10, 219-11, 10
18	Waste Water Collection & Disposal System	871-60, 841-45, 832-90, 40, 30, 20 ,10, 831-90, 812-30, 219-10, 140-40
18.1	Waste Water Facilities & Treatment Plants	871-90, 841-10, 832-90, 40, 831-90, 50, 40, 30, 10, 812-30, 730-70, 390-00, 219-11, 10, 141-40
18.2	Storm drains, Ditches, Dams, Retaining walls	872-40, 871-90, 50, 30, 20, 10, 843-50, 345-40, 320-22, 164-30, 111-12
19	Potable Water Distribution System	843-50, 40, 30, 20 ,10, 842-35, 30, 15, 12, 841-55, 50, 45, 40, 35, 30, 20, 355-40, 345-40, 320-40
19.1	Potable Water Facilities & Treatment Plants	843-20, 842-15, 841-70, 55, 50, 20, 10, 442-10, 345-40, 219-10, 141-90, 50, 40
20	Launch Pads	382-80, 11, 10
20.1	Launch support camera pads	382-13
20.2	Launch propellant & high pressure gas facilities	390-00, 382-31, 30, 320-22, 310-22
21	Pavement	922-20, 872-10, 860-90, 30, 10, 852-92, 91, 90, 32, 22, 21, 20, 12, 11, 10, 851-92, 91, 90, 22, 20, 12, 11, 10, 812-60, 690-90, 442-90, 390-00, 320-60, 50, 41, 40, 22, 21, 163-90, 141-90, 30, 10, 113-22, 21, 20, 112-12, 10, 111-22, 20, 11, 10,
22	Rail	

DM CAT	Facility Type	NASA Facility Category Class
23	Maintenance Facilities and PW Shops	860-90, 740-30, 711-00, 610-10, 442-90, 10, 310-30, 310-22, 220-10, 219-20, 219-11, 10, 141-50, 140-90, 50, 40, 30
23.1	Operational maintenance facilities	310-50, 40, 22, 220-14, 219-11, 212-20, 10
24	Other Buildings	890-55, 50, 872-90, 30, 871-90, 860-90, 852-12, 841-10, 833-40, 831-90, 40, 824-10, 823-30, 812-90, 60, 10, 811-90, 740-95, 90, 88, 76, 73, 56, 54, 43, 33, 30, 26, 18, 730-90, 70, 65, 25, 20, 10, 711-00, 610-90, 20,10, 510-00, 461-20, 452-10, 442-90, 10,
25	Other Facilities	890-95, 50, 30, 880-90, 40, 20, 10, 872-90, 40, 10, 871-50, 10, 851-92, 90, 843-50, 841-35, 833-90, 40, 30, 10, 831-90, 812-90, 811-90, 750-95, 90, 50, 30, 20, 10, 740-90, 83, 53, 730-65, 690-90, 20, 10, 610-30, 442-90, 50, 423-90, 20, 10, 411-90, 39
26	Land & Easements	932-50, 10, 922-10, 921-90, 30, 20, 10, 913-62, 61, 30, 912-11, 911-40, 33, 32, 31, 30, 20, 10, 871-90, 851-92, 822-10, 750-90, 40, 345-20, 141-20
27	Compressed Air Distribution	
27.1	Compressed Air Generation	890-60, 25, 350-20, 345-20, 310-40, 22, 219-11,
28	Prefabricated buildings, various uses	630-10, 12, 20, 16, 14, 30, 17, 21
29	Berthing and Housing	711-00, 730-90, 65

A.3.2 Facility Systems

The DM facility systems were developed from a review of other DM estimating methods for facilities and the ASTM UNIFORMAT II Classification for Building Elements. The following nine systems were selected for the NASA DM method:

- Structure: foundations, superstructure, slabs and floors, and pavements that are adjacent to, and considered part of, the facility.
- Exterior: wall coatings, windows, doors, and exterior sealants.
- Roofing: roof coverings, openings, gutters and flashing.
- HVAC: heating, ventilating and air conditioning systems, including controls and balancing devices.
- Electrical: service and distribution, lighting, communications, security and fire protection wiring and controls.
- Plumbing: water, sewer and fire protection piping, or piping for steam, gas, or water distribution in specialty systems (e.g., tanks, generation plants, etc.).
- Conveying: elevators, escalators, cranes and other lifts.
- Interior: all interior finishes including wall coverings, flooring, and ceilings.
- Program Support Equipment: installed in the facility to provide support for operational testing or research. For example, additional ventilation equipment or separate HVAC systems required only to support special testing or programs.

A.3.3 Current Replacement Value and Facility System CRV Percentages

The NASA RPI system contains the CRV for each facility. Table A-5 shows how the CRV is apportioned between each of the nine facility systems. The CRV System percentages are derived from the *Parametric Cost Estimating System (PACES)* [16], an accepted estimating tool for federal construction projects. The *PACES* method was derived from an evaluation of more than $40 billion of federal facilities projects.

TableA-5. DM Categories with CRV % Values (continues next page)

DM Cat	NASA_BLDG	STRUC	EXT	ROOF	HVAC	ELEC	PLUMB	CONV	INTF	EQUIP	SUM
1	R&D and Test Buildings	0.18	0.19	0.04	0.15	0.20	0.04	0.01	0.15	0.04	1.00
2	R&D Structures and Facilities	0.40	0.17	0.01	0.06	0.25	0.02	0.02	0.03	0.04	1.00
3	Wind Tunnels	0.30	0.05	0.01	0.01	0.15	0.01	0.01	0.01	0.45	1.00
4	Engine/Vehicle Static Test Facilities	0.38	0.03	0.01	0.04	0.26	0.01	0.03	0.02	0.22	1.00
5	Administrative Buildings	0.19	0.17	0.06	0.16	0.18	0.05	0.03	0.16	0.00	1.00
6	Training Buildings	0.18	0.20	0.05	0.12	0.21	0.05	0.01	0.18	0.00	1.00
7	Trailers	0.20	0.19	0.06	0.18	0.20	0.02	0.00	0.15	0.00	1.00
8	Storage Buildings	0.60	0.15	0.10	0.04	0.06	0.01	0.00	0.04	0.00	1.00
9	Storage Facilities	0.55	0.22	0.11	0.03	0.04	0.01	0.00	0.04	0.00	1.00
10	Fuel Storage Tanks	0.70	0.13	0.02	0.00	0.10	0.05	0.00	0.00	0.00	1.00
10.1	Specialized Liquid Storage Tanks	0.51	0.13	0.02	0.00	0.14	0.20	0.00	0.00	0.00	1.00
10.2	Fueling Stations & Systems	0.40	0.10	0.05	0.05	0.15	0.20	0.00	0.05	0.00	1.00
11	Magazines	0.33	0.30	0.05	0.06	0.15	0.02	0.00	0.09	0.00	1.00
12	Comm. & Tracking Buildings	0.21	0.20	0.05	0.16	0.18	0.05	0.00	0.15	0.00	1.00
13	Comm. & Tracking Facilities	0.55	0.10	0.02	0.05	0.26	0.00	0.00	0.02	0.00	1.00
13.1	Large Antennas	0.20	0.20	0.02	0.05	0.15	0.02	0.01	0.02	0.33	1.00
13.2	Small Antennas	0.50	0.30	0.00	0.00	0.10	0.00	0.00	0.00	0.10	1.00
14	Mission Control Operations Buildings	0.22	0.13	0.05	0.15	0.20	0.04	0.02	0.10	0.09	1.00
15	Lighting	0.17	0.00	0.00	0.00	0.83	0.00	0.00	0.00	0.00	1.00
16	Electrical Distribution System	0.39	0.03	0.00	0.00	0.58	0.00	0.00	0.00	0.00	1.00
16.1	Power Generation/Power Plant	0.30	0.10	0.05	0.10	0.39	0.01	0.00	0.05	0.00	1.00
16.2	Electric Substations, Switchgear & Transfer Yards	0.10	0.07	0.00	0.00	0.83	0.00	0.00	0.00	0.00	1.00
17	HVAC Distribution	0.30	0.10	0.00	0.00	0.33	0.27	0.00	0.00	0.00	1.00
17.1	HVAC Generation	0.20	0.10	0.05	0.35	0.10	0.15	0.00	0.05	0.00	1.00
18	Waste Water Collection & Disposal System	0.50	0.02	0.02	0.00	0.05	0.41	0.00	0.00	0.00	1.00
18.1	Waste Water Facilities & Treatment Plants	0.34	0.10	0.05	0.03	0.15	0.32	0.00	0.01	0.00	1.00
18.2	Storm drains, Ditches, Dams, Retaining walls	0.90	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	1.00

[16] *PACES* is an integrated PC-based parametric budgeting and cost estimating system developed by Earth Tech (http://earthtech.talpart.com.) that prepares parametric cost estimates for new facility construction and renovation. It was developed for military facility application and will soon be commercialized for use in the general building, industrial facilities, and transportation industries. *PACES* is available to military personnel via the U.S. Air Force. A U.S. Government employee can obtain a copy of the current military version of *PACES* by contacting the Air Force Civil Engineer Support Agency.

DM Cat	NASA_BLDG	STRUC	EXT	ROOF	HVAC	ELEC	PLUMB	CONV	INTF	EQUIP	SUM
19	Potable Water Distribution System	0.38	0.05	0.02	0.00	0.05	0.50	0.00	0.00	0.00	1.00
19.1	Potable Water Facilities & Treatment Plants	0.25	0.05	0.05	0.03	0.24	0.37	0.00	0.01	0.00	1.00
20	Launch Pads	0.51	0.10	0.03	0.03	0.25	0.04	0.02	0.02	0.00	1.00
20.1	Launch support camera pads	0.80	0.10	0.00	0.00	0.10	0.00	0.00	0.00	0.00	1.00
20.2	Launch propellant & high pressure gas facilities	0.48	0.05	0.02	0.00	0.20	0.25	0.00	0.00	0.00	1.00
21	Pavement	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
22	Rail	0.95	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	1.00
23	Maintenance Facilities & PW Shops	0.20	0.14	0.06	0.13	0.30	0.09	0.00	0.08	0.00	1.00
23.1	Operational maintenance. facilities	0.20	0.14	0.06	0.13	0.28	0.09	0.02	0.08	0.00	1.00
24	Other Buildings	0.22	0.15	0.12	0.10	0.15	0.11	0.00	0.15	0.00	1.00
25	Other Facilities	0.71	0.10	0.02	0.05	0.10	0.01	0.00	0.01	0.00	1.00
26	Land & Easements	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
27	Compressed Air Distribution	0.50	0.00	0.00	0.00	0.10	0.40	0.00	0.00	0.00	1.00
27.1	Compressed Air Generation	0.25	0.10	0.05	0.05	0.15	0.35	0.00	0.05	0.00	1.00
28	Prefab buildings, various uses	0.18	0.17	0.05	0.15	0.15	0.15	0.00	0.15	0.00	1.00
29	Berthing & Housing	0.15	0.17	0.09	0.16	0.18	0.07	0.02	0.16	0.00	1.00

Table A-5. DM Categories with CRV % Values *(continued from provious page)**.***

A.3.4 Estimated Repair Cost as a Percentage of CRV by System Condition

SYSTEM	5	4	3	2	1
STRUC	**0**	**1**	**10**	**25**	**150**
EXT	**0**	**1**	**10**	**50**	**101**
ROOF	**0**	**9**	**38**	**75**	**150**
HVAC	**0**	**2**	**13**	**63**	**133**
ELEC	**0**	**2**	**13**	**63**	**133**
PLUMB	**0**	**2**	**10**	**57**	**121**
CONV	**0**	**2**	**13**	**50**	**100**
INTF	**0**	**1**	**10**	**50**	**101**
EQUIP	**0**	**2**	**13**	**50**	**100**

Table A-6. System Condition Percentages.
Percentages over 100 account for demolition and disposal costs

Each condition rating has a corresponding system condition CRV percentage. These percentages vary by system type, and are provided in Table A-6. This table is crucial to the applicability of the DM method and as such it received analysis by several engineering sources. Through the use of a survey of major and minor repairs at Kennedy Space Center (KSC), combined with an estimated original construction cost using *RSMeans*[17] estimating tools, system condition percentages have been developed for each of the nine systems per each of the five ratings. Actual

[17] R.S. Means. CostWorks 2002 Version 6.1; 1996-2002. *RSMeans* is North America's leading supplier of construction cost information. A product line of Reed Construction Data, *RSMeans* provides accurate and up-to-date cost information that helps owners developers, architects, engineers, contractors and others to carefully and precisely project and control the cost of both new building construction and renovation projects.

repair costs for a variety of facilities at KSC such as Landing Aids Control Building, the Cafeteria (Multi-Function Facility), Electromagnetic Lab, Operations Building #1, and Logistics Facility were used to establish the repair costs. The CRVs of these facilities ranged from $602,000 to $22 million.

The estimates for the various levels of repair work were compared to an estimated cost for the system construction. These comparisons (expressed as percentages) translate into the DM Condition Percentages used in the DM model. The process began with the 1 rating, where the cost for a major repair was established. That cost was then compared to the estimated original construction cost producing a maximum system condition percentage. For example, a 1 rating in structure equates to 150% of the maximum repair cost of the structure of a facility including some demolition and disposal cost. The system condition percentages for 2 through 4 were then established using the same method. However, according to the U.S. Army Corps of Engineers (USACE), 50% of the replacement value is the decision point to determine whether a system should be repaired or replaced. Because a 2 rating is where this decision point falls, the USACE standard was applied as a rule. The rule stated that a 2 equals at most 50% of the 1 rating system condition percentage.

For example, even though the calculated value for 2 in the system category of Roofing was 90%, the highest the rating could be is 1/2 of the calculated value for the 1 rating (150% in this case), which equals 75% because that is when the replacement of the roof would most likely occur. The 5 rating was left at 0% because what small DM would occur in this rating would be negligible.

APPENDIX B. REMOTE AND LOW VALUE SITES NOT VISITED BUT ASSESSED

Table B-1. Summary Table for Remote and Low Value Sites

Line Name	CRV Total ($M)	DM Total ($M)	FCI	Active DM ($M)	Active FCI	Inactive DM ($M)	Inactive FCI
American Samoa Bilateral Ranging Transponder Facility	$0.02	$0.00	4.0	$0.00	4.0	0	
Ascension Bilateral Ranging Transponder Facility	$0.01	$0.00	4.0	$0.00	4.0		
Bear Lake Mobile Laser Site	$0.15	$0.21	1.0			$0.21	1.0
Bermuda Mobile Laser Site	$0.17	$0.23	1.0			$0.23	1.0
Easter Island Mobile Laser Site	$0.17	$0.00	3.9	$0.00	3.9		
Ft. Davis Mobile Laser Site	$0.05	$0.08	1.0			$0.08	1.0
Haystack Mobile Laser Site	$0.08	$0.01	3.0	$0.01	3.0		
Hawaii Kauai Mobile Laser Site	$0.05	$0.00	4.0	$0.00	4.0		
Hawaii Maui Mobile Laser Site	$0.03	$0.00	3.0	$0.00	3.0		
Kwajalein Mobile Laser Site	$0.10	$0.14	1.0			$0.14	1.0
Monument Peak Mobile Laser Site	$0.17	$0.00	4.0	$0.00	4.0		
Oak Mountain Mobile Laser Site	$0.12	$0.17	1.0			$0.17	1.0
Otay Mountain Mobile Laser Site	$0.20	$0.28	1.0			$0.28	1.0
Owens Valley Mobile Laser Site	$0.07	$0.10	1.0			$0.10	1.0
Platteville Mobile Laser Site	$0.12	$0.17	1.0			$0.17	1.0
Quincy Mobile Laser Site	$0.35	$0.01	4.0	$0.01	4.0		
Tahiti Mobile Laser Site	$0.02	$0.03	1.0			$0.03	1.0
Yarragadee Mobile Laser Site	$0.46	$0.01	4.0	$0.01	4.0		
Bermuda Spaceflight Tracking/Data Network	$20.70	$27.36	1.0			$27.36	1.0
Yarragadee Space Transportation System Facility	$0.02	$0.02	1.0			$0.02	1.0
Cabo San Lucas Verylong Baseline Interferometry Site	$0.00	$0.00	1.0			$0.00	1.0
Cerro Tololo Verylong Baseline Interferometry Site	$0.01	$0.02	1.0			$0.02	1.0
Ensenada Verylong Baseline Interferometry Site	$0.00	$0.00	1.0			$0.00	1.0
Iquique Verylong Baseline Interferometry Site	$0.01	$0.01	1.0			$0.01	1.0
Mazatlan Verylong Baseline Interferometry Site	$0.05	$0.07	1.0			$0.07	1.0
Point Arguello Verylong Baseline Interferometry Site	$0.03	$0.04	1.0			$0.04	1.0
Santiago Verylong Baseline Interferometry Site	$0.01	$0.00	4.0	$0.00	4.0		
Soccorro Island Verylong Baseline Interferometry	$0.00	$0.00	1.0			$0.00	1.0
Gambia	$8.19	$0.31	3.8	$0.31	3.8		
Morocco	$1.79	$0.03	4.0	$0.03	4.0		
Totals ($M)	**$33**	**$29**	**2.0**	**$0.37**	**3.8**	**$28.93**	**1.0**

Table B-2. DM cost by system for Remote and Low Values Sites

LineName	StrucDM	RoofDM	ExtDM	IntfDM	ElecDM	HvacDM	PlumbDM	ConvDM	EquipDM
American Samoa Bilateral Ranging Transponder Fac	$96.00	$31.00	$17.00	$3.00	$91.00	$17.00	$0.00	$0.00	$0.00
Ascension Bilatering Ranging Transponder Fac	$34.00	$11.00	$6.00	$1.00	$32.00	$6.00	$0.00	$0.00	$0.00
Bilateral Ranging Transponder Total	$130.00	$43.00	$24.00	$5.00	$123.00	$24.00	$0.00	$0.00	$0.00
Bear Lake Mobile Laser Site	$126,477.00	$4,599.00	$15,484.00	$3,097.00	$53,013.00	$10,195.00	$0.00	$0.00	$0.00
Bermuda Mobile Laser Site	$109,653.00	$8,825.00	$23,919.00	$14,217.00	$46,968.00	$22,695.00	$4,957.00	$614.00	$0.00
Easter Island Mobile Laser Site	$1,807.00	$392.00	$307.00	$31.00	$1,323.00	$153.00	$0.00	$0.00	$0.00
Ft. Davis Mobile Laser Site	$44,633.00	$1,623.00	$5,464.00	$1,093.00	$18,708.00	$3,598.00	$0.00	$0.00	$0.00
Haystack Mobile Laser Site	$4,985.00	$631.00	$831.00	$166.00	$2,808.00	$0.00	$0.00	$0.00	$0.00
Hawaii Kauai Mobile Laser Site	$284.00	$85.00	$47.00	$9.00	$246.00	$0.00	$0.00	$0.00	$0.00
Hawaii Maui Mobile Laser Site	$2,038.00	$258.00	$340.00	$68.00	$1,148.00	$0.00	$0.00	$0.00	$0.00
Kwajalein Mobile Laser Site	$81,220.00	$2,953.00	$9,943.00	$1,989.00	$34,044.00	$6,547.00	$0.00	$0.00	$0.00
Monument Peak Mobile Laser Site	$953.00	$312.00	$173.00	$35.00	$901.00	$173.00	$0.00	$0.00	$0.00
Oak Mountain Mobile Laser Site	$99,418.00	$3,615.00	$12,171.00	$2,434.00	$41,671.00	$8,014.00	$0.00	$0.00	$0.00
Otay Mountain Mobile Laser Site	$168,385.00	$6,123.00	$20,614.00	$4,123.00	$70,579.00	$13,573.00	$0.00	$0.00	$0.00
Owens Valley Mobile Laser Site	$56,715.00	$2,062.00	$6,943.00	$1,389.00	$23,772.00	$4,572.00	$0.00	$0.00	$0.00
Platteville Mobile Laser Site	$102,382.00	$3,723.00	$12,534.00	$2,507.00	$42,913.00	$8,253.00	$0.00	$0.00	$0.00
Quincy Mobile Laser Site	$1,943.00	$636.00	$353.00	$71.00	$1,837.00	$353.00	$0.00	$0.00	$0.00
Tahiti Mobile Laser Site	$16,968.00	$617.00	$2,077.00	$415.00	$7,112.00	$1,368.00	$0.00	$0.00	$0.00
Yarragadee Mobile Laser Site	$2,532.00	$829.00	$460.00	$92.00	$2,394.00	$460.00	$0.00	$0.00	$0.00
Shiloh Microwave Link Facility									
Bermuda Spaceflight Tracking/Data Network	$11,816,747.00	$1,102,333.00	$3,124,772.00	$1,826,365.00	$5,901,535.00	$2,924,919.00	$649,403.00	$16,467.00	$0.00
Yarragadee Space Transportation System Facility	$14,352.00	$522.00	$1,757.00	$351.00	$6,016.00	$1,157.00	$0.00	$0.00	$0.00
Cabo San Lucas Verylong Baseline Interferometry Site	$2,821.00	$103.00	$345.00	$69.00	$1,182.00	$227.00	$0.00	$0.00	$0.00
Cerro Tololo Verylong Baseline Interferometry Site	$9,426.00	$343.00	$1,154.00	$231.00	$3,951.00	$760.00	$0.00	$0.00	$0.00
Ensenada Verylong Baseline Interferometry Site	$2,217.00	$81.00	$271.00	$54.00	$929.00	$179.00	$0.00	$0.00	$0.00
Iquique Verylong Baseline Interferometry Site	$5,408.00	$197.00	$662.00	$132.00	$2,267.00	$436.00	$0.00	$0.00	$0.00
Mazatlan Verylong Baseline Interferometry Site	$38,888.00	$2,312.00	$6,493.00	$2,767.00	$17,693.00	$5,401.00	$725.00	$254.00	$0.00
Point Arguello Verylong Baseline Interferometry Site	$24,785.00	$901.00	$3,034.00	$607.00	$10,389.00	$1,998.00	$0.00	$0.00	$0.00
Santiago Verylong Baseline Interferometry Site	$109.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Soccorro Island Verylong Baseline Interferometry	$1,209.00	$44.00	$148.00	$30.00	$507.00	$97.00	$0.00	$0.00	$0.00
Gambia	$56,264.00	$36,986.00	$33,957.00	$25,955.00	$80,919.00	$33,741.00	$42,560.00	$0.00	$0.00
Morocco	$4,597.00	$7,221.00	$2,483.00	$2,140.00	$9,487.00	$4,279.00	$1,918.00	$0.00	$0.00
Remote-Low Value Site Total	**12,797,476.00**	**1,188,411.00**	**3,286,783.00**	**1,890,446.00**	**6,384,558.00**	**3,053,195.00**	**699,563.00**	**17,335.00**	**0.00**
% of NASA Total	3.25%	0.56%	2.45%	2.04%	0.81%	0.91%	0.81%	0.24%	0.00%

APPENDIX C. QUALITY ASSURANCE COMPARTIVE CHARTS

System Rating Difference (Greater than 2)

Ames Research Center

Installation: Ames Research Center

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Convey	Equip
N127D	SALVAGE/STORAGE BUILDING	0 4	0 4	0 4	0 4	0 4	0 4	0 4	0 0	0 0
N218B	SUPPORT SHED TO 14-FT TWT	2 4	2 5	3 4	2 3	3 3	0 3	3 3	3 3	0 0
N229F	CHEMICAL STORAGE BUILDING	5 5	4 4	4 4	4 4	3 0	3 0	3 0	0 0	0 0
N248B	GRD.SUPP.EQUIP.BLDG. No. 2	5 5	4 4	4 5	4 4	4 4	0 4	4 4	4 4	0 0
N248C	ROTORCRAFT MAINTENANCE FACILITY	5 5	4 5	4 5	4 4	4 4	0 4	0 0	4 4	0 0
N250A	COMPRESSED AIR TANK FARM	5 5	0 0	0 4	0 0	4 4	0 0	4 0	0 0	0 4
N271	INDUSTRIAL WASTEWATER PRE-TREAT	5 5	5 5	5 5	5 5	5 5	5 0	5 5	0 0	0 0
NA283	GAS DISTRIBUTION SYSTEM	4 4	0 0	0 0	0 0	0 4	0 0	4 4	0 0	0 0
T10-A	OFFICE TRAILER FILE# T-190 PENDING E	0 3	0 2	0 2	0 2	0 2	0 2	0 2	0 0	0 0
T10-B	OFFICE TRAILER FILE# T-008 PENDING E	0 3	0 2	0 2	0 2	0 2	0 2	0 2	0 0	0 0
T10-C	OFFICE TRAILER FILE# T-255 PENDING E	0 3	0 2	0 2	0 2	0 2	0 2	0 0	0 0	0 0
T127-D	RECYCLE OFFICE TRAILER	0 4	0 4	0 4	0 4	0 4	0 4	0 4	0 0	0 0
T16-B	OFFICE TRAILER FILE# T-000 EXCESS PE	0 2	0 3	0 2	0 2	0 3	0 0	0 0	0 0	0 0
T19-A/T9	T923-D ADMIN&KITCHEN TRAILER CHILD	0 4	0 4	0 4	0 4	0 5	0 4	0 4	0 0	0 0
T24-A	OFFICE TRAILER FILE# T-320 PENDING E	0 3	0 3	0 3	0 3	0 3	0 3	0 0	0 0	0 0
T24-B	OFFICE TRAILER FILE# T-948 PENDING E	0 3	0 3	0 3	0 3	0 3	0 3	0 0	0 0	0 0
T25-B	OFFICE TRAILER FILE# T-705 PENDING E	0 3	0 3	0 3	0 2	0 3	0 3	0 0	0 0	0 0
T2-B	OFFICE TRAILER FILE# T-272 PENDING E	0 2	0 3	0 2	0 3	0 3	0 3	0 4	0 0	0 0
T2-D	OFFICER TRAILER (SECURITY) FILE# T-2	0 2	0 2	0 2	0 2	0 3	0 3	0 4	0 0	0 0
T6-A	OFFICE TRAILER FILE# T-609 PENDING E	0 4	0 4	0 3	0 5	0 4	0 4	0 4	0 0	0 0

Installation: Crows Landing

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Convey	Equip
C103	AIRFIELD LIGHTING VAULT	4 4	3 0	3 3	3 0	2 1	0 0	0 0	0 0	0 0
CL201	SECURITY FENCING	3 3	0 0	0 3	0 0	0 0	0 0	0 0	0 0	0 0
CL203	COMMUNICATION LINES	3 3	0 0	0 3	0 0	4 4	0 0	0 0	0 0	0 0
CL204	WATER DISTRIBUTION SYSTEM	3 3	0 0	0 3	0 0	0 0	0 0	3 3	0 0	0 0
CL206	RUNWAY 35-17/30-12	3 3	0 0	0 3	0 0	0 0	0 0	0 0	0 0	0 0
CL207	AIRFIELD TAXIWAYS	3 3	0 0	0 3	0 0	0 0	0 0	0 0	0 0	0 0
CL208	AIRCRAFT PARKING APRON	4 3	0 0	0 3	0 0	0 0	0 0	0 0	0 0	0 0

System Rating Difference (Greater than 2)

CL210	ELECTRICAL DISTRIBUTION SYSTEM	3	3	0	0	0	3	0	0	3	4	0	0	0	0	0	0	0	0
CL211	SANITARY SEWER LINES	3	3	0	0	0	3	0	0	0	0	0	0	3	3	0	0	0	0

Installation: Moffet Federal Airfield

Facility	Facility Description	Structure		Roof		Exterior		Interior Finishes		Electric		HVAC		Plumbing		Convey		Equip	
137	AIRCRAFT FUEL STORAGE TANK	4	4	4	0	0	0	0	0	4	4	0	0	4	4	0	0	0	0
138	AIRCRAFT FUEL STORAGE TANK	4	4	4	0	0	0	0	0	4	4	0	0	4	4	0	0	0	0
139	AIRCRAFT FUEL STORAGE TANK	4	4	4	0	0	0	0	0	4	4	0	0	4	4	0	0	0	0
140	AIRCRAFT FUEL STORAGE TANK	4	4	4	0	0	0	0	0	4	4	0	0	4	4	0	0	0	0
469	AVIATION METEOROLOGICAL FACILITY	4	4	4	0	0	4	0	0	4	4	0	0	0	0	0	0	0	0
471	HAZARDOUS MATERIAL STORAGE	5	5	4	3	5	5	0	3	0	0	0	0	0	0	0	0	0	0
512A	ENLISTED BARRACKS	4	4	4	4	4	4	3	3	4	4	0	3	4	4	0	0	0	0
512B	ENLISTED BARRACKS	4	4	4	4	4	4	3	3	4	4	0	3	4	4	0	0	0	0
512C	ENLISTED BARRACKS	4	4	4	4	4	4	3	3	3	4	0	3	4	4	0	0	0	0
547C	BEQ	4	4	4	4	4	4	3	3	4	4	0	3	4	4	0	0	0	0
547D	BEQ	4	4	4	4	4	4	3	3	4	4	0	3	4	4	0	0	0	0
547E	BEQ	4	4	4	4	4	4	3	3	4	4	0	3	4	4	0	0	0	0
561	MISSILE MAGAZINE	4	4	3	3	4	4	3	3	4	4	0	3	0	0	3	3	0	0
655	MOBILITY WAREHOUSE A	4	4	3	3	4	4	5	5	4	4	0	3	0	0	0	0	0	0
679	CIVIL ENGINERRING WAREHOUSE	5	0	5	0	5	0	5	0	5	0	5	0	5	0	0	0	0	0
967	SOFTBALL FIELD # 1	5	5	0	0	5	5	0	0	0	3	0	0	0	0	0	0	0	0

System Rating Difference (Greater than 2)

Dryden Flight Research Center

Installation: Dryden Flight Research Center

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Convey	Equip
0013	SHUTTLE SUPPORT (DEBRIS)	4 0	3 0	3 0	4 0	4 0	4 0	0 0	0 0	0 0
0016	SHUTTLE SUPPORT (KSC PAYLOADS)	4 0	4 0	3 0	4 0	4 0	4 0	0 0	0 0	0 0
0017/18	SHUTTLE SUPPORT (FLIGHT CREW EQUI	4 0	4 0	3 0	4 0	4 0	4 0	0 0	0 0	0 0
0020	CREW ROOM	5 0	4 0	4 0	4 0	4 0	4 0	4 0	0 0	0 0
0026	IFMP Aministrative Trailer	4 0	4 0	4 0	4 0	4 0	4 0	0 0	0 0	0 0
0028	SHUTTLE SUPPORT (KSC PAYLOADS)	3 0	3 0	3 0	3 0	3 0	3 0	0 0	0 0	0 0
0042-46	PAO TRAILER	0 4	0 4	0 4	0 4	0 3	0 3	0 4	0 0	0 0
0044	PAO TRAILER	0 4	0 4	0 4	0 4	0 3	0 3	0 4	0 0	0 0
0045	PAO TRAILER	0 4	0 4	0 4	0 4	0 3	0 3	0 4	0 0	0 0
0063	TRAILER No. 63	0 3	0 3	0 3	0 3	0 3	0 3	0 0	0 0	0 0
1623	AIRCRAFT SUPPORT FACILITY	5 5	4 4	4 4	4 4	5 0	3 3	4 4	0 0	4 4
4834	SHUTTLE SHOPS	0 4	0 4	0 4	0 4	0 0	0 0	0 0	0 0	0 0
4862	MICROWAVE TOWER/COMMUNICATIONS	4 4	4 4	4 4	4 0	4 4	5 0	0 0	0 0	0 0
4869	GATE HOUSE	3 0	3 0	3 0	3 0	3 0	3 0	0 0	0 0	0 0
4984	PAYLOAD RECEIVING AREA	0 4	0 4	0 3	0 3	0 3	0 0	0 3	0 0	0 0
na	Steam distribution Center	4 4	0 4	0 4	0 4	0 4	0 4	4 5	0 0	0 0
NB1	AIRFIELD TAXIWAY	4 3	0 0	4 0	0 0	0 0	0 0	0 0	0 0	0 0
NB102	EMERGENCY EYEWASH/SHOWERS	4 0	0 0	0 0	0 0	0 0	0 0	4 0	0 0	0 0
NB103	WATER STORAGE TANK	4 4	0 4	4 4	0 0	4 4	0 0	4 4	0 0	0 0
NB104	RUN-UP PAD JET PROPEL.A/C	5 0	0 0	5 0	0 0	0 0	0 0	0 0	0 0	0 0
NB105	UTILITY TUNNEL	3 3	3 3	3 3	3 0	0 0	0 0	0 3	0 0	0 0
NB11	OPEN STORAGE STABILIZED	4 0	4 0	4 0	0 0	0 0	0 0	0 0	0 0	0 0
NB111	FPS-16 TRIPLEX ANTENNA	4 4	0 0	4 4	0 0	5 0	0 0	0 0	0 0	0 0
NB112	FACILITIES FOR ANTENNA No. 2	4 4	4 4	4 4	4 4	0 4	0 4	0 0	0 0	0 0
NB117	HAZARDOUS MATERIALS STORAGE FACI	4 4	4 4	4 4	0 0	0 4	0 0	0 4	0 0	0 0
NB12	CONTAMINATED WASTE STORAGE	4 0	4 0	4 0	0 0	0 0	0 0	0 0	0 0	0 0
NB15	FLAME DEFLECTORS	4 4	0 0	4 0	0 0	0 0	0 0	0 0	0 0	0 0
NB16	HYDRAULIC A/C LIFT	4 0	0 0	0 0	0 0	3 0	0 0	3 0	0 0	0 0
NB18	ANTENNA FARM	4 4	0 4	4 4	0 4	3 3	0 4	0 4	0 0	0 0

System Rating Difference (Greater than 2)

NB2	SHOULDER, TAXIWAY OIL	4	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB29	GROUNDING SYSTEM	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
NB3	TOW-WAY AND OTHERS	4	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB31	NATURAL GAS TRANSMISSION LINE	4	4	0	0	0	0	0	0	0	4	0	0	4	4	0	0	0	0
NB32	SEPTIC TANK & DRAIN FIELD	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NB33	SEPTIC TANK & DRAIN FIELD	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NB36	SANITARY SEWER (6 Inch)	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
NB4	AIRCRAFT PARKING AND OTHERS	4	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB40	COMPRESSED AIR SYSTEMS	4	4	0	0	0	0	0	0	0	4	0	0	4	4	0	0	0	0
NB43	ANTENNA-LONG PERIODIC RADIATOR	0	4	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0
NB5	AIRCRAFT PARKING AND SERVICING AR	5	5	0	0	5	0	0	0	4	4	0	0	0	0	0	0	0	0
NB50	CATSITE ROADWAY	4	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB51	ROAD (BITUMINOUS)	4	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB52	CULVERTS AND OTHER	4	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB53	BUS LOADING AREA	4	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB54	D.B.ROADS AND OTHERS	3	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
NB56	REFLECTORS AND TARGETS (BORESITE	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NB57	NASA NAME SIGNS	4	4	0	0	4	0	0	0	4	4	0	0	0	0	0	0	0	0
NB58	VEHICLE PARKING AREA (BITUMINOUS)	3	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
NB59	CONCRETE SIDEWALKS	4	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB6	AIRCRAFT APRON	4	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB60	BITUMINOUS SIDEWALKS	4	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB61	SIDEWALKS AND OTHERS	4	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB62	SIDEWALKS AND OTHERS	4	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB67	SECURITY FENCING	4	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
NB7	AIRCRAFT PARKING (BITUMINOUS)	4	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
NB73	MSB LANDING SYSTEMS SHELTER PADS	4	0	4	0	3	0	3	0	3	0	0	0	0	0	0	0	0	0
NB8	CATSITE DIESEL FUEL TANK	4	4	0	4	4	4	0	0	0	4	0	0	4	4	0	0	0	0
NB83	SUBSTATION No. 3	4	5	0	0	4	5	0	0	4	3	0	3	0	0	0	0	0	0
NB84	SUBSTATION No. 4	4	4	4	0	4	5	4	0	4	4	0	0	0	0	0	0	0	0
NB85	SUBSTATION No. 5	4	5	0	0	4	0	0	0	4	3	0	0	0	0	0	0	0	0
NB9	OPEN STORAGE AREA (BITUMINOUS)	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0

System Rating Difference (Greater than 2)

NB90	SUBSTATION NO. 19	4	3	0	0	4	0	0	0	4	3	0	0	0	0	0	0	0	0				
NB97	Substation No. 14	5	4	0	4	0	4	0	5	4	3	0	5	0	5	5	5	0	5				

System Rating Difference (Greater than 2)

Glenn Research Center

Installation: Glenn Research Center

Facility	Facility Description	Structure		Roof		Exterior		Interior Finishes		Electric		HVAC		Plumbing		Convey		Equip	
0012	STEAM PLANT	2	4	4	4	3	4	4	4	3	3	4	0	4	3	4	4	4	0
0025	Sanitary Lift Station	5	5	5	5	5	5	5	5	5	5	5	0	5	5	0	0	5	0
0031	EMERGENCY WATER RESERVOIR	3	3	3	3	3	2	3	0	3	2	4	0	3	3	0	0	0	0
0032	SUBSTATION C	4	5	5	0	4	4	5	0	3	4	0	0	0	0	0	0	0	0
0035-15	Test Cell 21 & 22 Storage	3	3	3	3	3	3	3	3	3	3	0	3	0	3	0	0	0	3
0035-16	Storage	3	3	3	3	3	3	3	3	3	3	0	3	0	3	0	0	0	3
0035-17	Electrical Storage	3	3	3	3	3	3	3	3	3	3	0	3	0	3	0	0	0	3
0035-18	Test Cell 23 Storage	3	3	3	3	3	3	3	3	3	3	0	3	0	3	0	0	0	3
0035-20	Cell 31 & 32 , 11 & 12 Storage	3	3	3	3	3	3	3	3	0	3	0	3	0	3	0	0	0	3
0035-21	Consumable Storage Area	3	3	3	3	3	3	3	3	3	3	0	3	0	3	0	0	0	3
0039	8X6 FT.SUPERSONIC WIND TUNNEL	4	4	3	4	4	4	4	4	3	3	3	0	3	0	0	0	4	4
0041	SUBSTATION F	5	5	0	0	5	5	5	0	5	4	0	0	0	0	0	0	0	0
0045	DROP TOWER	3	5	0	3	4	5	3	4	4	4	3	4	4	4	4	4	4	0
0054	8X6 FT. RESEARCH & CONTROL BUILDIN	5	5	4	4	3	5	4	4	3	3	5	0	3	0	0	0	0	0
0057	8X6 FT.SWT AIR DRYER BLDG	4	3	3	4	4	4	3	3	3	3	4	0	3	0	0	0	4	4
0063	HIGH TEMPERATURE VAPOR PLANT	4	3	4	3	3	3	0	3	4	4	4	0	4	0	0	0	0	0
0065	PSL ALTITUDE CHAMBERS(2)	2	3	0	3	2	3	0	3	0	3	0	3	0	2	0	0	0	2
0067	PSL PRIMARY COOLERS(2)	2	3	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0
0068	PSL SECONDARY COOLER(1)	2	3	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0
0074	PSL COOL.TWR.WATER PUMP B	4	4	4	5	4	4	4	4	3	3	4	0	4	0	0	0	4	0
0081	ERB SPRAY COOLER BUILDING	4	3	3	3	3	3	4	3	3	3	4	0	4	0	4	4	4	0
0088	10X10 SWT AIR DRYER BUILDING	4	4	4	4	3	3	4	4	3	4	0	4	4	3	0	0	4	4
0089	10X10 FT.SWT SUBSTATION K	5	5	4	0	5	5	5	0	4	5	5	0	0	0	0	0	0	0
0091	10X10 SWT LOW PRESSURE FUEL PUMP	4	4	0	0	4	0	0	0	3	0	0	0	4	4	0	0	4	0
0095	PSL DESICCANT AIR DRYER	4	4	3	3	4	3	4	3	4	4	4	0	4	0	0	0	4	4
0096	PSL FUEL STORAGE BUILDING	4	5	4	4	3	5	3	3	4	3	4	0	4	0	0	0	0	0
0097	PSL OXIDANT STORAGE BLDG.	3	4	3	3	3	3	3	3	3	3	3	0	3	0	0	0	0	0
0099	ERB COMBUSTION AIR HEATER	4	3	4	0	3	3	4	0	4	3	0	0	0	0	0	0	0	0
0103	Sewage Concrete Tanks	4	3	4	3	3	3	4	0	3	3	3	0	4	3	0	0	0	3

APPENDIX D. FACILITIES UNDER $5000 BOOK VALUE THAT WERE ASSESSED BUT NOT ON THE RPI.

The following list of facilities are those with a known book value of under $5000, an unknown book value or CRV, or facilities that Centers ID as ID ONLY for accounting purposes. The purpose of this table is to show how many of these facilities there are in addition to the number of facilities on the RPI list.

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
ARC	N123	MATERIAL/EQUIPMENT STORAGE	$53,569	$3,451	$19,553	Active	7
ARC	N253B	SENTRY HOUSE (GATE 18)	$29,090	$5,000	$2,106	Mothballed	24
ARC	T16-B	OFFICE TRAILER FILE# T-000 EXCESS PENDING	$16,920	$4,767	$0		7
ARC	T20-E	CHILD CARE STORAGE FILE# T-874 (EXCESS PENDING)	$19,260	$4,201	$0		7
ARC	T25-A	SHOP TRAILER FILE# T-431 PENDING EXCESS	$8,604	$3,425	$0		7
ARC	T25-B	OFFICE TRAILER FILE# T-705 PENDING EXCESS	$16,200	$2,307	$0		7
CL	C124	FIRE PROTECTION WATER TANK	$26,827	$3,280	$35,465	Abandoned	19
CL	C135	WATER DISTRIBUTION PUMPHOUSE	$2,291	$300	$951	Abandoned	19.1
CL	C135	WATER DISTRIBUTION PUMPHOUSE	$2,333	$300	$3,085	Abandoned	19.1
CL	C151	POTABLE WATER STORAGE TANK	$31,859	$2,000	$1,819	Active	19
CL	C164	SWIMMING POOL FILTER BUILDING	$24,439	$3,745	$11,662	Abandoned	24
CL	C165	BATH HOUSE	$13,051	$2,000	$3,781	Abandoned	24
CL	C175	BALLFIELD SNACK BAR	$3,263	$500	$1,073	Abandoned	25
CL	C175	BALLFIELD SNACK BAR	$3,203	$500	$1,053	Abandoned	25
CL	CL203	COMMUNICATION LINES	$4,248	$650	$228	Abandoned	16
CL	CL203	COMMUNICATION LINES	$4,327	$650	$232	Abandoned	16
CL	CL213	SIDEWALKS	$9,413	$2,550	$2,353	Active	21
CL	T-167	MEDICAL TRAILER	$29,090	$5,000	$12,197	Abandoned	7
CL	T-400	FUEL FARM OFFICE TRAILER	$1,151	$1,000	$508	Abandoned	7
CL	T-400	FUEL FARM OFFICE TRAILER	$1,173	$1,000	$517	Abandoned	7
CP	CP283	GAS PIPELINE	$2,912	$344	$16	Active	17
CP	CP283	GAS PIPELINE	$2,858	$344	$0	Active	17
CP	CP294A	FENCES-PERIMETER	$6,754	$798	$68	Active	25
MFA	021	DETACHED GARAGES	$85,133	$3,454	$4,350	Heritage	24
MFA	022	DETACHED GARAGES	$85,133	$3,454	$4,350	Heritage	24
MFA	024	ADMINISTRATION	$74,855	$3,037	$1,460	Heritage	5
MFA	027	SMALL ARMS/PYROTECHNICS MAGAZINE	$2,323	$96	$127	Mothballed	11
MFA	027	SMALL ARMS/PYROTECHNICS MAGAZINE	$2,366	$96	$110	Mothballed	11
MFA	028	SMALL ARMS/PYROTECHNIC MAGAZINE	$11,669	$627	$543	Mothballed	11
MFA	034	STORAGE	$35,539	$1,627	$661	Active	8
MFA	036	SENTRY HOUSE/MAIN GATE	$11,490	$526	$444	Active	24
MFA	037	SCALE HOUSE	$47,176	$1,914	$1,429	Active/Heritage	25
MFA	038	TENNIS COURTS	$20,063	$946	$2,006	Active	25
MFA	040	FLAGPOLE	$10,771	$437	$0	Active	25
MFA	044	STORAGE FACILITY	$60,831	$3,702	$4,337	Mothballed	8
MFA	050	RADIO STATION FACILITY	$26,633	$3,833	$2,173	Active	12
MFA	070	FUSE & DETONATOR MAGAZINE	$11,517	$723	$1,026	Out Grant	11
MFA	076	LOCKSMITH SHOP	$28,096	$1,810	$1,388	Active	23
MFA	077	SOUTH GATE SENTRY HOUSE	$26,001	$1,675	$762	Active	24

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
MFA	079	GENERAL WAREHOUSE	$43,138	$2,779	$5,444	Mothballed	8
MFA	081	GENERAL STORAGE	$26,979	$1,738	$418	Active	28
MFA	082	GENERAL/ATHLETIC STORAGE	$36,013	$2,320	$4,105	Active	28
MFA	083	LINE OPERATIONS BUILDING	$77,614	$5,000	$18,620	Mothballed	23
MFA	085	GENERAL STORAGE	$46,180	$2,975	$18,172	Mothballed	28
MFA	113	NAVY EXCHANGE STORAGE	$31,046	$2,000	$1,413	Out Grant	28
MFA	118	LINE MAINTENANCE SHELTER	$40,825	$2,630	$13,472	Mothballed	28
MFA	119	LINE MAINTENANCE SHELTER	$30,922	$1,992	$11,410	Mothballed	28
MFA	129	EAST GATE SENTRY HOUSE	$12,936	$2,305	$58	Active	24
MFA	175	LINE MAINTENANCE SHELTER	$14,859	$2,000	$20,687	Abandoned	23
MFA	184	MAINTENANCE STORAGE	$7,467	$960	$885	Active	28
MFA	331	AIRFIELD STORAGE	$12,021	$1,730	$905	Active	28
MFA	342	FUEL FARM STORAGE	$3,209	$300	$395	Out Grant	8
MFA	342	FUEL FARM STORAGE	$3,151	$300	$388	Out Grant	8
MFA	346	AIRCRAFT LINE SHELTER	$8,405	$864	$10,980	Abandoned	23
MFA	347	AIRCRAFT LINE OPERATIONS BUILDING	$65,727	$4,000	$27,553	Abandoned	23.1
MFA	348	FUEL FARM SAMPLING/TEST BUILDING	$20,934	$2,152	$2,012	Out Grant	23
MFA	350	LINE MAINTENANCE SHELTER	$8,405	$864	$11,273	Abandoned	23
MFA	351	LINE MAINTENANCE SHELTER	$8,405	$864	$11,273	Abandoned	23
MFA	359	GOLF COURSE GROUNDS MAINTENANCE SHOP	$29,718	$4,000	$915	Out Grant	28
MFA	367	FLIGHTLINE DENTAL OFFICE	$18,721	$1,750	$7,646	Mothballed	5
MFA	372	FUEL LOADING RACK RESTROOM	$2,755	$320	$178	Out Grant	24
MFA	372	FUEL LOADING RACK RESTROOM	$2,806	$320	$181	Out Grant	24
MFA	380	BUS/PERSONNEL SHELTER	$2,463	$350	$29	Active	25
MFA	380	BUS/PERSONNEL SHELTER	$2,508	$350	$29	Active	25
MFA	382	AIRCRAFT LINE OPERATIONS FACILITY	$8,405	$864	$564	Active	12
MFA	390	FUEL PARTS STORAGE	$9,243	$864	$1,166	Out Grant	8
MFA	399	COVERED STORAGE GOLF COURSE LANDSCAPING EQUIPMENT	$34,696	$4,670	$0	Out Grant	9
MFA	400	AIR OPERATIONS STORAGE	$7,782	$1,120	$1,623	Active	28
MFA	402	BUS/PERSONNEL SHELTER	$2,463	$350	$43	Active	25
MFA	402	BUS/PERSONNEL SHELTER	$2,508	$350	$29	Active	25
MFA	445	SMALL CRAFT BERTHING	$21,500	$3,000	$32,250	Mothballed	25
MFA	459	RECREATION STORAGE	$12,257	$1,260	$504	Active	8
MFA	464	OPERATIONAL STORAGE	$17,251	$960	$4,045	Active	8
MFA	468	AVIATION METEOROLOGICAL FACILITY	$4,729	$750	$70	Active	13
MFA	468	AVIATION METEOROLOGICAL FACILITY	$4,817	$750	$71	Active	13
MFA	469	AVIATION METEOROLOGICAL FACILITY	$4,729	$750	$60	Active	13
MFA	469	AVIATION METEOROLOGICAL FACILITY	$4,817	$750	$68	Active	13
MFA	470	PUBLIC WORKS STORAGE	$54,225	$2,200	$7,906	Mothballed	8
MFA	472	AIRFRAMES SHOP	$16,056	$2,500	$4,444	Mothballed	23
MFA	478	STAND-BY GENERATOR SHELTER	$3,015	$500	$210	Active	16.1
MFA	478	STAND-BY GENERATOR SHELTER	$3,071	$500	$187	Active	16.1
MFA	482	PUBLIC WORKS STORAGE FACILITY	$26,984	$4,394	$1,595	Active	9
MFA	502	GOLF COURSE RESTROOMS	$13,491	$2,500	$580	Out Grant	24
MFA	527	MAINTENANCE STORAGE SHED	$15,937	$3,150	$975	Active	8
MFA	533	CHASE PARK RESTROOMS	$17,316	$4,500	$537	Active	24
MFA	534	BBQ SHELTER	$11,544	$3,000	$177	Active	24
MFA	537	GOLF COURSE RESTROOMS	$4,909	$1,560	$339	Out Grant	24

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
MFA	537	GOLF COURSE RESTROOMS	$5,001	$1,560	$171	Out Grant	24
MFA	570	PUBLIC WORKS MAINTENANCE STORAGE	$4,279	$2,000	$63	Active	23
MFA	570	PUBLIC WORKS MAINTENANCE STORAGE	$4,358	$2,000	$64	Active	23
MFA	574	STORAGE WAREHOUSE B	$3,266	$2,000	$4	Out Grant	8
MFA	574	STORAGE WAREHOUSE B	$3,206	$2,000	$4	Active	8
MFA	581	THEATER MARQUEE	$1,746	$1,089	$179	Active	25
MFA	581	THEATER MARQUEE	$1,778	$1,089	$22	Active	25
MFA	582	ELLIS GATE MARQUEE	$1,746	$1,089	$22	Active	25
MFA	582	ELLIS GATE MARQUEE	$1,778	$1,089	$22	Active	25
MFA	657	WAREHOUSE F	$17,112	$2,200	$55	Out Grant	28
MFA	658	WAREHOUSE F	$17,112	$2,200	$55	Out Grant	28
MFA	659	WAREHOUSE G	$35,661	$4,800	$68	Out Grant	8
MFA	660	WAREHOUSE H	$35,661	$4,800	$68	Out Grant	8
MFA	661	WAREHOUSE I	$17,112	$2,200	$732	Out Grant	28
MFA	780	TELEPHONE REMOTE SWITCH	$4,079	$3,000	$0	Active	12
MFA	780	TELEPHONE REMOTE SWITCH	$4,155	$3,000	$0	Active	12
MFA	942	NAVY EXCHANGE MAINTENANCE SHOP	$88,897	$4,947	$11,183	Mothballed	23
MFA	949	READY ISSUE MAGAZINE	$35,661	$4,800	$4,065	Mothballed	11
MFA	958	COVERED STORAGE	$14,822	$1,995	$1,045	Out Grant	9
MFA	964	BASKETBALL COURT	$49,296	$3,000	$444	Active	25
MFA	965	VOLLEYBALL COURTS	$49,296	$3,000	$320	Active	25
DFRC	0026	IFMP Aministrative Trailer	$2,960	$2,925	$0	Active	23.1
DFRC	0026	IFMP Aministrative Trailer	$3,015	$2,925	$57	Active	23.1
DFRC	4804	STOREHOUSE (PAINT,OIL & THINNER)	$23,334	$3,000	$905	Active	9
DFRC	4816	GUARD POST No. 3	$1,822	$440	$65	Active	24
DFRC	4816	GUARD POST No. 3	$1,662	$440	$59	Active	24
DFRC	4818	GUARD POST No. 6	$1,924	$500	$64	Active	24
DFRC	4818	GUARD POST No. 6	$1,889	$500	$63	Active	24
DFRC	4829	GUARD POST No. 12(SHUTTLE)	$4,661	$2,962	$658	Active	24
DFRC	4829	GUARD POST No. 12(SHUTTLE)	$4,450	$2,962	$628	Active	24
DFRC	4836	GUARD POST No. 4 (FLIGHTLINE)	$0		$0		0
DFRC	4840A	Small movable storage trailer next to building 4840	$0		$0		0
DFRC	4840B	Small movable storage trailer next to building 4840	$0		$0		0
DFRC	4840C	Small movable storage trailer next to building 4840	$0		$0		0
DFRC	4843	CREDIT UNION (MODULAR)	$0		$0		0
DFRC	4868	ENTRY CONTROL BUILDING	$4,206	$2,800	$482	Active	24
DFRC	4868	ENTRY CONTROL BUILDING	$4,284	$2,800	$491	Active	24
DFRC	4869	GATE HOUSE	$2,902	$2,800	$0	Standby	24
DFRC	4869	GATE HOUSE	$2,956	$2,800	$417	Standby	24
DFRC	4871	GUARD-POST #13	$9,763	$4,480	$388	Active	24
DFRC	4879	PEERSONNEL HOUSTING	$4,157	$4,011	$534	Active	29
DFRC	4879	PEERSONNEL HOUSTING	$4,234	$4,011	$544	Active	29
DFRC	4981	BORESIGHT EQUIPMENT BLDG.	$79,836	$3,645	$2,467	Active	12
DFRC	4983	WATER PUMP STATION (CATSITE)	$11,802	$1,980	$201	Active	28
DFRC	NB106	SEWAGE EJECTOR STATION	$16,358	$2,000	$360	Active	18
DFRC	NB13	FIRE SPRINKLER SYSTEM	$12,325	$0	$137	Active	25
DFRC	NB15	FLAME DEFLECTORS	$27,994	$4,000	$280	Active	18.2
DFRC	NB2	SHOULDER, TAXIWAY OIL	$8,179	$1,000	$82	Active	21

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
DFRC	NB32	SEPTIC TANK & DRAIN FIELD	$10,119	$2,000	$101	Active	18.1
DFRC	NB33	SEPTIC TANK & DRAIN FIELD	$9,235	$2,000	$92	Active	18.1
DFRC	NB35	SANITARY SEWER (3 Inch)	$5,066	$850	$71	Active	18
DFRC	NB35	SANITARY SEWER (3 Inch)	$4,974	$850	$497	Active	18
DFRC	NB43	ANTENNA-LONG PERIODIC RADIATOR	$23,842	$4,000	$0	Active	13.2
DFRC	NB53	BUS LOADING AREA	$5,159	$956	$52	Active	21
DFRC	NB66	EVAPORATION POND	$14,183	$2,341	$142	Active	18.2
DFRC	NB8	CATSITE DIESEL FUEL TANK	$1,382	$465	$18	Active	10
DFRC	NB8	CATSITE DIESEL FUEL TANK	$1,408	$465	$15	Active	10
DFRC	NG2	Office Trailer	$0		$0		0
DFRC	NG3	Office Trailer	$0		$0		0
DFRC	NG4	Office Trailer	$0		$0		0
DFRC	UPS ATF	UPS ATF Building	$0		$0		0
DFRC	UPS ATF	UPS ATF Building	$0		$0		0
GRC	0018-1	Fire Pump Building	$0		$0		0
GRC	0018-2	Gas Compressor Building	$0		$0		0
GRC	0035-1	Office Building	$0		$0		0
GRC	0035-1	Office Building	$0		$0		0
GRC	0035-10	Rocket Engine Cooling and Materials Research Facility.	$0		$0		0
GRC	0035-10	Rocket Engine Cooling and Materials Research Facility.	$0		$0		0
GRC	0035-13	Silo / Storage	$0		$0		0
GRC	0035-13	Silo / Storage	$0		$0		0
GRC	0035-14	Test Cell	$0		$0		0
GRC	0035-14	Test Cell	$0		$0		0
GRC	0035-15	Test Cell 21 & 22 Storage	$0		$0		0
GRC	0035-15	Test Cell 21 & 22 Storage	$0		$0		0
GRC	0035-16	Storage	$0		$0		0
GRC	0035-16	Storage	$0		$0		0
GRC	0035-17	Electrical Storage	$0		$0		0
GRC	0035-17	Electrical Storage	$0		$0		0
GRC	0035-18	Test Cell 23 Storage	$0		$0		0
GRC	0035-18	Test Cell 23 Storage	$0		$0		0
GRC	0035-2	Storage	$0		$0		0
GRC	0035-2	Storage	$0		$0		0
GRC	0035-20	Cell 31 & 32 , 11 & 12 Storage	$0		$0		0
GRC	0035-20	Cell 31 & 32 , 11 & 12 Storage	$0		$0		0
GRC	0035-21	Consumable Storage Area	$0		$0		0
GRC	0035-21	Consumable Storage Area	$0		$0		0
GRC	0035-22	Storage	$0		$0		0
GRC	0035-3	Storage	$0		$0		0
GRC	0035-3	Storage	$0		$0		0
GRC	0035-6	Test Cell	$0		$0		0
GRC	0035-6	Test Cell	$0		$0		0
GRC	0035-7	Cell 22 Control	$0		$0		0
GRC	0035-7	Cell 22 Control	$0		$0		0
GRC	0035-8	Test Cell	$0		$0		0
GRC	0035-8	Test Cell	$0		$0		0
GRC	0035-9	Test Cell	$0		$0		0

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GRC	0035-9	Test Cell	$0		$0		0
GRC	0038A		$0		$0		0
GRC	0103	Sewage Concrete Tanks	$0		$0		0
GRC	0141	FLIGHT RESEARCH DRUM STORAGE BLDG.	$5,772	$1,500	$109	Active	9
GRC	0310	ANTENNA ALIGNMENT TOWER	$1,154	$300	$116	Active	13
GRC	0310	ANTENNA ALIGNMENT TOWER	$1,133	$300	$47	Active	13
GRC	0318	RECREATION SERVICES BUILDING	$9,970	$1,500	$578	Active	24
GRC	0333A	Acoustic Lab, EMI (Electromagnetic Interference) Lab ,Thermal Cycling Chambers Lab and Storage Area	$0		$0		0
GRC	3930	DISPOSAL AREA	$11,224	$2,000	$112	Active	25
PBS	1193	REACTOR RADAR & WEATHER TOWER HOUSE	$4,939	$915	$1,578	In-Active	1
PBS	1193	REACTOR RADAR & WEATHER TOWER HOUSE	$4,849	$915	$1,549	In-Active	1
PBS	1432	SPF LN2 SERVICE BUILDING	$8,412	$1,660	$2,292	Active	24
PBS	1433	SPF BOTTLE STORAGE BUILDING	$12,538	$2,570	$118	Active	9
PBS	1492	SPF MONITORING STATIONS (N-NE-E)	$7,816	$1,431	$0	Active	1
PBS	1913	WIND TURBINE WEATHER TOWER	$12,800	$5,000	$0	In-Active	25
PBS	1921	Wind Turbine Shop	$0		$0		24
PBS	2131	"A" Site Boiler House	$0		$0		24
PBS	2431	E SITE BOILER HOUSE	$50,437	$2,610	$68,897	In-Active	17.1
PBS	5335	LH2 STORAGE DEWAR CONTROL BUILDING	$226,246	$4,000	$19,593	In-Active	24
PBS	7132	VEHICLE SERVICE STATION BUILDING	$3,610	$669	$80	Active	24
PBS	7132	VEHICLE SERVICE STATION BUILDING	$3,544	$669	$165	Active	24
PBS	7197	RECREATION SERVICE BUILDING	$5,722	$960	$0	In-Active	24
PBS	7198	COMFORT STATION - RECREATION AREA	$8,047	$1,350	$10,888	In-Active	24
PBS	7199	GUARD HOUSE - MASON ROAD	$19,407	$1,080	$0	In-Active	24
PBS	8335	SEWAGE LIFT STATION (REACTOR)	$10,896	$684	$2	Active	18
PBS	8351	SEWAGE LIFT STATION (COLUMBUS AVE)	$33,771	$2,120	$0	Active	18
PBS	8352	SEWAGE CHLORINE CONTACT TANK	$25,297	$5,000	$37,946	Active	18.1
PBS	8353	SEWAGE MIXING CHAMBER	$17,708	$3,500	$26,562	Active	18.1
PBS	8392	SEWAGE DIGESTING TANK	$68,895	$4,325	$103,343	In-Active	18.1
PBS	8393	SEWAGE SLUDGE BED	$7,965	$500	$11,948	In-Active	18.1
PBS	8394	SEWAGE SLUDGE BED	$7,965	$500	$11,948	In-Active	18.1
PBS	8396	SEWAGE DIVERSION CHAMBER	$17,708	$3,500	$26,562	In-Active	18.1
PBS	8431	GAS METER HOUSE (ADMIN. AREA)	$4,035	$640	$539	Active	24
PBS	8431	GAS METER HOUSE (ADMIN. AREA)	$4,110	$640	$375	Active	24
PBS	8432	GAS METER HOUSE (REACTOR AREA)	$16,908	$2,540	$350	Active	24
PBS	8433	GAS METER HOUSE (MAINTENANCE AREA)	$6,656	$1,020	$549	Active	24
PBS	8434	GAS METER HOUSE (ROCKET AREA)	$6,656	$1,020	$831	Active	24
PBS	8435	GAS METER HOUSE (SPACE PROP. AREA)	$9,179	$1,540	$314	Active	24
PBS	9804	Gaseous Nitrogen Farm at B-3	$0		$0		10.1
PBS	9837	Helium Farm at Reactor	$0		$0		10.1
PBS	9858	Liquid Nitrogen Dewal at Space Power Facility	$0		$0		10.1
BRT	999	BRT FACILITY (ASCENSION BRT)	$6,205	$3,800	$91	Active	13
GSFC	101	B-FARMHOUSE-ART CLUB/ANTENNA TEST RANGE	$34,821	$4,500	$1,967	Active	24
GSFC	209	B-NORTH 20' BLDG/OTS	$17,524	$4,169	$582	Active	1
GSFC	923	B-STORAGE TRAILER FOR B.79--B&R	$5,743	$4,462	$0	Active	7
GSFC	936	B-TRAILER/B.21/T21E-21	$8,934	$4,100	$0	Active	7
GSFC	937	B-TRAILER/N. B10/T10N-23	$14,578	$3,341	$0	Active	7
GSFC	938	B-TRAILER/PTS/P417-12	$19,985	$3,950	$0	Active	7

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GSFC	939	B-TRAILER/PTS/P414-9	$13,645	$3,127	$0	Active	7
GSFC	941	B-TRAILER/PTS/P415-10	$10,756	$2,126	$0	Active	7
GSFC	942	B-TRAILER/OTS/T206N-20	$10,896	$5,000	$0	Active	7
GSFC	945	B-TRAILER/TRAP-SKEET CLUB/T101S-18	$14,588	$4,819	$7,524	Active	7
GSFC	947	B-TRAILER/FLYING CLUB/T2N-21	$10,716	$2,118	$811	Active	7
GSFC	954	S-CONCRETE PAD/PROPAGATION SITE	$8,363	$3,542	$84	Active	21
MOBLAS	999	ACCESS ROAD (BERMUDA MOBLAS)	$12,800	$5,000	$19,200	Abandoned	21
MOBLAS	999	COMMUNICATIONS	$1,541	$1,045	$19	Active	13
MOBLAS	999	COMMUNICATIONS	$1,570	$1,045	$20	Active	13
STDN	993	TV SURVEILLANCE SYSTEM	$3,885	$2,275	$5,394	Abandoned	13
STDN	993	TV SURVEILLANCE SYSTEM	$3,958	$2,275	$5,496	Abandoned	13
STDN	004	TECHNOLOGICAL LIBRARY BUILDING	$4,533	$1,000	$879	Active	6
STDN	004	TECHNOLOGICAL LIBRARY BUILDING	$4,618	$1,000	$138	Active	6
STDN	005	FLAMMABLE STORAGE BUILDING	$23,088	$5,000	$3,583	Active	8
STDN	012	FLAMMABLE STORAGE BUILDING	$9,224	$2,650	$461	Active	8
STDN	018	GASOLINE STATION W/ PAD	$0		$0		10.2
STDN	019	SANITARY FACILITY BUILDING	$5,818	$1,000	$2,239	Active	24
STDN	020	COVERED STORAGE BUILDING	$10,896	$5,000	$698	Active	8
STDN	022	SUPPLY/STORAGE BUILDING	$11,054	$1,800	$147	Active	8
STDN	024	SECURITY BUILDING	$5,612	$1,000	$0	Active	24
STDN	033	30 FT ANTENNA BLDG	$0		$0		12
STDN	035	SANITARY FACILITY	$5,396	$1,000	$0	Active	25
STDN	051	AGAVE ANTENNA	$0		$0		13.2
STDN	052	TELETRAC ANTENNA	$0		$0		13.2
STDN	053	BORESIGHT ANTENNA	$0		$0		13.2
STDN	054	TLM TEST ANTENNA	$0		$0		13.2
STDN	055	HF WHIP ANTENNA	$0		$0		13.2
STDN	060	BORESIGHT TOWER AND FOUNDATIONS	$0		$0		13
STDN	061	COLLIMATION TOWER	$0		$0		13
STDN	071	30 FT USB ANTENNA	$0		$0		13.2
STDN	072	BORESIGHT TYPE II ANTENNA	$0		$0		13.2
STDN	073	REDUNDANT VERLORT TOWER	$0		$0		24
STDN	078	SCAMP ANTENNA	$0		$0		13.2
STDN	X36	COLLIMATION TOWER	$0		$0		13
STDN	X62	COMMUNICATIONS BLDG	$0		$0		12
STDN	X63	MICROWAVE TOWER	$0		$0		13
STDN	X64	GUARD SHACK	$0		$0		24
STDN	X75	20 METER ANTENNA & PLATFORM	$0		$0		13.2
STDN	X76	UNIVERSITY OF HAWAII 7.2 METER P-SAT ANTENNA	$0		$0		13.2
STDN	X77	SATAN ANTENNA (VHF TRACKING) & PLATFORM	$0		$0		13.2
WFF	C Band Ant.	Antenna	$0		$0		13.1
WFF	C Band Antenna	Antenna	$0		$0		13.1
WFF	C Band transpor	Transponder	$0		$0		13.1
WFF	PF 140	Foundation	$0		$0		21
WFF	PF 141	Foundation	$0		$0		21
WFF	PF 151/ NOL	Shipping Container	$0		$0		7
WFF	PF121	Ballon Inflation Facility	$0		$0		2
WFF	TORS Van #1	Shipping Container	$0		$0		7

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
WFF	TORS Van #2	Shipping Container	$0		$0		25
WFF	TOTS 5m Ant.	Shipping Container	$0		$0		25
WFF	TOTS 5m Com. Tr	Trailer	$0		$0		7
WFF	A-028	AFLD.MLS LDG. 2.4KV SUB#2	$10,335	$3,414	$0	Mothballed	16.2
WFF	A-029	AFLD MLS LDG 2.4KV SUB #3	$10,335	$3,414	$0	Mothballed	16.2
WFF	A-031	AFLD MLS LDG 2.4KV SUB #4	$10,335	$3,414	$0	Mothballed	16.2
WFF	A-041A	RADAR PROPERTY STORAGE FAC	$6,483	$4,617	$0	Active	28
WFF	B-130	1000G A/G FUEL OIL STORAGE TANK	$4,725	$3,500	$54	Active	10
WFF	B-130	1000G A/G FUEL OIL STORAGE TANK	$4,639	$3,500	$53	Active	10
WFF	C-016	ULDB BALLOON CRAFT STORAGE BUILDING	$6,644	$4,617	$143	Active	24
WFF	D-008B	550G A/G FUEL OIL STORAGE TANK	$3,711	$2,800	$0	Active	10
WFF	D-008B	550G A/G FUEL OIL STORAGE TANK	$3,780	$2,800	$0	Active	10
WFF	D-010A	ELECT.TRANSFORMER STATION	$27,000	$3,060	$494		16.2
WFF	D-010B	COOLING STATION	$0		$0		17.1
WFF	D-012I	STP OUTFALL	$7,792	$502	$2,941	Abandoned	18.1
WFF	D-036	FUELING HYDRANT	$3,511	$2,190	$47	Active	10.2
WFF	D-036	FUELING HYDRANT	$3,576	$2,190	$80	Active	10.2
WFF	D-098A	STP SLUDGE DRYING BED	$28,815	$3,523	$10,875	Active	18.1
WFF	E-007A	25 TON AIR COOLED CONDEN.	$9,911	$3,092	$159	Active	17.1
WFF	E-134A	1000G A/G FUEL OIL STORAGE TANK	$4,639	$3,500	$0	Active	10
WFF	E-134A	1000G A/G FUEL OIL STORAGE TANK	$4,725	$3,500	$0	Active	10
WFF	F-005A	PKG AIRCOOLED WATER CHILLER UNIT	$9,571	$4,392	$0	Active	17.1
WFF	F-008A	SUBSTATION	$8,223	$4,124	$0	Active	16.2
WFF	F-010A	TOOL & EQUIP STOREHOUSE	$32,633	$2,800	$2,092	Active	8
WFF	F-017	AUTO PARTS STORAGE FACILITY	$24,235	$4,325	$1,229	Active	9
WFF	F-027	PAPER SHREDDER FACILITY	$37,458	$4,994	$5,173	Active	24
WFF	F-030	WEMA RECREATION FACILITY	$23,346	$2,400	$10,746	Active	24
WFF	F-036	WEMA STORAGE BLDG - WFF	$7,330	$1,002	$262	Active	8
WFF	F-163	CAL LAB BULK STOR BLDG	$18,804	$3,062	$49	Active	9
WFF	F-167	SEWAGE LIFT STATION BLDG.	$25,355	$2,026	$2,383	Active	18
WFF	F-170	POMB STORAGE BUILDING	$17,057	$2,380	$519	Active	23
WFF	F-172	ACS PRESSURE VESSELL TESTING MAG	$7,121	$1,005	$139	Active	9
WFF	F-211	AUTO PARTS STORAGE FACILITY	$14,696	$3,175	$1,089	Active	9
WFF	H-023	WATER PUMP HOUSE	$30,972	$4,175	$18,803	Abandoned	19.1
WFF	H-031	550G A/G FUEL OIL STORAGE TANK	$3,780	$2,800	$5,310	Abandoned	10
WFF	H-031	550G A/G FUEL OIL STORAGE TANK	$3,711	$2,800	$5,213	Abandoned	10
WFF	H-114	WATER PUMP HOUSE	$16,358	$2,000	$6,757	Abandoned	19.1
WFF	I-0007	COMSEC SECURITY FENCING & GATES	$7,233	$4,727	$72	Active	25
WFF	I-0009	COMMUNICATIONS U/G CABLE (FPQ-6)	$9,002	$1,483	$900	Active	16
WFF	I-0021	NSWC MK86 RADAR TWR FOUNDATION SLAB	$3,458	$2,025	$346	Active	21
WFF	I-0021	NSWC MK86 RADAR TWR FOUNDATION SLAB	$3,523	$2,025	$352	Active	21
WFF	I-0030	VEHICULAR PKG AREAS CONC - ML	$19,482	$3,436	$1,948	Active	21
WFF	I-0034	SEPTIC TANK & DRAINFIELD SYSTEM	$23,269	$3,323	$233	Active	18.1
WFF	I-0035	ISL CEILOMETER SYS CNTRL CABLE RTE	$4,407	$2,749	$44	Active	13
WFF	I-0036	SIDEWALKS -CONCRETE - ML	$13,191	$4,602	$1,319	Active	21
WFF	I-0044	WATER WELL NO. 1 WALLOPS MAINLAND	$13,565	$2,288	$210	Active	19
WFF	I-0045	WATER WELL NO. 2 - MAINLAND	$13,565	$2,288	$210	Active	19
WFF	I-0047	ML EXPERMTRS DATA/CONTROL CABLE RTE	$1,621	$1,011	$20	Active	13

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
WFF	I-0053	TRAFFIC WARNING SIGNS (PED & VEH)	$6,168	$1,099	$617	Active	25
WFF	I-0067	SEWAGE/SEPTIC TANK DRAINFIELD	$2,982	$1,985	$39	Active	18.1
WFF	I-0067	SEWAGE/SEPTIC TANK DRAINFIELD	$3,037	$1,985	$40	Active	18.1
WFF	I-0074	AREA IDENT SIGN/LCH GATE MAIN ENTR	$6,780	$1,324	$678	Active	25
WFF	I-0118	FPQ-6 ANTENNA SSY SERVICE PAVEMENT	$10,018	$1,785	$100	Active	21
WFF	I-0119	ISLAND RADAR VAN PARKING PAD	$16,069	$3,480	$1,607	Active	21
WFF	I-0151	SPANDAR ANTENNA ASSY SERV PAVEMENT	$3,887	$1,191	$389	Active	21
WFF	I-0151	SPANDAR ANTENNA ASSY SERV PAVEMENT	$3,816	$1,191	$382	Active	21
WFF	I-0152	WBO HELIUM TRANSFER PIPING FACILITY	$2,102	$634	$0	Active	10
WFF	I-0154	CABLE HOUSE (M/H NO. 65) TERMINAL	$13,491	$2,500	$213	Active	16
WFF	J-018	1000G A/G FUEL OIL STORAGE TANK	$4,639	$3,500	$53	Active	10
WFF	J-018	1000G A/G FUEL OIL STORAGE TANK	$4,725	$3,500	$50	Active	10
WFF	M-005	UNDERGROUND MAGAZINE	$61,052	$4,000	$22,772	Abandoned	11
WFF	M-006	UNDERGROUND MAGAZINE	$30,526	$2,000	$15,278	Abandoned	11
WFF	M-016A	34.6 TON COOLING TOWER	$14,657	$2,868	$0	Active	17.1
WFF	M-017A	1000G A/B FUEL OIL STORAGE TANK	$4,725	$3,500	$50	Active	10
WFF	M-017A	1000G A/B FUEL OIL STORAGE TANK	$4,639	$3,500	$49	Active	10
WFF	M-018	ROCKET VEHICLE SHELTER	$20,122	$3,280	$378	Active	9
WFF	M-019A	1000G A/G FUEL OIL STORAGE TANK	$4,639	$3,500	$0	Active	10
WFF	M-019A	1000G A/G FUEL OIL STORAGE TANK	$4,725	$3,500	$0	Active	10
WFF	M-021A	1000G A/G FUEL OIL STORAGE TANK	$4,725	$3,500	$50	Active	10
WFF	M-021A	1000G A/G FUEL OIL STORAGE TANK	$4,639	$3,500	$49	Active	10
WFF	M-023	TELEPHONE CABLE HUT	$7,317	$1,596	$498	Abandoned	12
WFF	M-025	READY ISSUE MAGAZINE	$6,944	$1,056	$27	Active	11
WFF	M-183	READY SERVICE MAGAZINE	$20,794	$4,806	$322	Active	11
WFF	M-184	READY ISSUE STOR MAGAZINE	$10,696	$1,727	$0	Active	11
WFF	N-155	CEILOMETER PROJECTOR	$16,078	$3,482	$161	Active	25
WFF	N-162A	VHF/UHF ANTENNA TOWER	$7,000	$4,287	$0	Active	13
WFF	N-163A	ELECT TRANSFORMER STATION	$43,393	$4,394	$0	Active	16.2
WFF	N-166	FLAMMABLE STOREHOUSE	$18,075	$2,522	$127	Active	9
WFF	N-167B	12.5 TON AIR COOLED COND	$17,535	$3,014	$281	Active	17.1
WFF	N-174A	TELEMETRY ELEC EQUIP SHELTER	$11,347	$3,524	$20	Active	9
WFF	N-180	FLAMMABLE MATL STOR CUBICAL - WFF	$10,773	$2,333	$1,409	Active	9
WFF	N-218	FLAMMABLES STOREHOUSE	$6,387	$1,006	$14	Active	9
WFF	N-224	1000G A/G FUEL OIL STORAGE TANK	$4,639	$3,500	$0	Active	10
WFF	N-224	1000G A/G FUEL OIL STORAGE TANK	$4,725	$3,500	$0	Active	10
WFF	S-0033	PARKING AREA CONCRETE "J" AREA	$116,655	$3,500	$11,666	Active	21
WFF	S-0039	BALLOON LAUNCH OUTDOOR WORK AREA	$1,482	$1,000	$148	Active	21
WFF	S-0050	COMM EQUIP (PAVED)	$10,350	$1,918	$104	Active	21
WFF	S-0057	O/D ELEC SVC POWER STAND	$17,619	$3,497	$0	Active	16.2
WFF	S-0067	MOTOR VHCLE R/W TRAFFIC SIGNAL SYS	$16,084	$4,339	$294	Active	15
WFF	S-0079	RECEIVER SITE COMM TOWER	$2,319	$1,358	$250	Active	13
WFF	S-0083	RFI WARNING LIGHT & CABLING	$8,526	$1,990	$135	Active	16
WFF	S-0089	LAND VEHICLE FUEL DISPENSING	$8,418	$4,839	$842	Active	10.2
WFF	S-0098	ANTENNA RECEIVER - TRANSMITTER	$3,916	$2,293	$415	Active	13.2
WFF	S-0146	40' ALUM FLAG POLE (VIC)	$3,668	$2,151	$0	Active	25
WFF	S-0146	40' ALUM FLAG POLE (VIC)	$3,601	$2,151	$0	Active	25
WFF	S-0153	ADAS FLOODLIGHT SYSTEM	$18,222	$4,272	$333	Active	15

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
WFF	S-0155	VIC CONCRETE (TKG STA ANT) PEDESTAL	$2,866	$1,755	$0	Active	25
WFF	S-0155	VIC CONCRETE (TKG STA ANT) PEDESTAL	$2,813	$1,755	$28	Active	25
WFF	S-0164	ORG STOR OPEN - PAVED (TELECOMM)	$24,585	$3,828	$2,459	Active	9
WFF	S-0168	LOADING/UNLOADING CONC SVC RAMP	$4,507	$3,000	$451	Active	21
WFF	S-0168	LOADING/UNLOADING CONC SVC RAMP	$4,590	$3,000	$459	Active	21
WFF	T-009	TRAILER/TRAVEL W/UNDERCARRIAGE	$9,224	$2,650	$1,183	Active	7
WFF	U-012	ELECTRICAL SUBSTATION	$0		$0		16.2
WFF	U-012A	EMERGENCY GENERATOR	$0		$0		0
WFF	U-020B	ELECT POWER CNTRL BLDG	$16,975	$2,550	$380	Active	16.1
WFF	U-020C	MOBILE RADAR SPARE PARTS STOR BLDG	$6,210	$4,600	$116	Active	8
WFF	U-025C	RARF FLAMMABLES STORAGE BLDG	$6,581	$4,752	$0	Mothballed	28
WFF	U-026	PROJECTS MAINTENANCE SHOP	$31,224	$4,893	$462	Mothballed	23
WFF	U-053	OUTDOOR ELECT SUBSTATION	$9,896	$1,669	$181	Active	16.2
WFF	U-055B	UHF/VHF ANT COM SUPT STRUCT	$6,960	$4,001	$0	Active	13
WFF	U-060A	BORESIGHT EQUIP SHELTER	$20,460	$4,303	$606	Active	25
WFF	U-064	COMM ANTENNA SUPPORT TWR	$5,818	$1,000	$73	Active	13
WFF	U-071	COMPRESS DEHYDRATOR BLDG	$10,762	$4,558	$142	Active	25
WFF	U-072	AN/FPQ 6 RADAR SPT STOR BLDG - ML	$5,978	$4,428	$114	Active	8
WFF	V-012	BORESIGHT TOWER	$0		$0		13
WFF	V-013	BORESIGHT TOWER	$0		$0		13
WFF	V-014	BORESIGHT TOWER	$0		$0		13
WFF	V-042	READY SERVICE MAGAZINE	$6,802	$1,000	$68	Standby	11
WFF	V-052	READY SVC CHML STOR MAG	$6,802	$1,000	$68	Standby	11
WFF	V-081	OUTDOOR ELECT SUBSTATION	$12,415	$2,571	$124	Standby	16.2
WFF	W-016	READY STORAGE CUBICAL	$11,255	$1,778	$113	Active	11
WFF	W-035B	Strorage Blockhose Appx 35sf	$0		$0		13
WFF	W-051	FLAMMABLES STOREHOUSE	$6,802	$1,000	$128	Active	9
WFF	W-067	READY ISSUE EXPLO STOR CUBICAL	$11,255	$1,778	$219	Mothballed	11
WFF	W-105	WINCH SHELTER (PAD 3A)	$12,677	$2,125	$127	Mothballed	24
WFF	W-110	GUARD HOUSE (PAD 3A)	$13,159	$2,205	$2,607	Mothballed	24
WFF	X-005A	PTH FINDER RADAR ANT TWR	$8,471	$1,456	$578	Active	13
WFF	X-007	RADAR ELECT EQUIP SHELTER	$7,374	$2,436	$79	Active	9
WFF	X-036	STORAGE SHED	$14,894	$2,760	$286	Active	9
WFF	X-053	STORM DRAINAGE PUMP STA	$2,495	$1,528	$49	Active	18.1
WFF	X-053	STORM DRAINAGE PUMP STA	$2,450	$1,528	$23	Active	18.1
WFF	X-141	Main Xformer/SwitchGear Bldg - Built 1999 Approx 2500 sf	$0		$0		16.1
WFF	Y-016	READY SERVICE MAGAZINE	$17,057	$2,380	$239	Active	11
WFF	Y-020	READY ISSUE STORAGE MAGAZINE	$12,742	$1,778	$127	Active	9
WFF	Y-036	FIRING CUBICAL	$6,590	$887	$774	Active	16
WFF	Y-037	FIRING CUBICAL	$4,681	$630	$550	Abandoned	16
WFF	Y-037	FIRING CUBICAL	$4,595	$630	$1,698	Abandoned	16
WFF	Y-037A	LAUNCH COMPLEX FIRE CUBICAL 2	$5,818	$1,000	$683	Active	16
WFF	Y-038	LAUNCHER EQUIP SHELTER	$16,186	$2,782	$453	Active	24
WFF	Y-038A	LAUNCH COMPLEX FIRE CNTL SHELTER	$6,590	$887	$104	Active	16
WFF	Y-046	STORM DRAINAGE PUMP STATION	$6,064	$3,963	$113	Active	18.1
WFF	Y-047	STORM DRAINAGE PUMP STATION	$23,622	$3,963	$378	Active	18
WFF	Y-060A	1000G A/G FUEL OIL STORAGE TANK	$4,639	$3,500	$0	Active	10
WFF	Y-060A	1000G A/G FUEL OIL STORAGE TANK	$4,725	$3,500	$54	Active	10

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
WFF	Y-062	45 KVA TRANSFORMER - PAD MOUNTED	$4,227	$3,284	$0	Active	16.2
WFF	Y-062	45 KVA TRANSFORMER - PAD MOUNTED	$4,150	$3,284	$0	Active	16.2
WFF	Y-067	SUPPORT CUBICAL	$10,773	$2,333	$1,077	Active	25
WFF	Z-026	45 KVA TRANSFORMER - PAD MOUNTED	$4,227	$3,284	$42	Active	16.2
WFF	Z-026	45 KVA TRANSFORMER - PAD MOUNTED	$4,150	$3,284	$69	Active	16.2
WFF	Z-043	ELEC POWER INTERFACE FACILITY	$6,722	$938	$67	Active	16
WFF	Z-045	COMMUNICATIONS INTERFACE BLDG	$13,398	$2,444	$134	Active	24
WFF	Z-053	45 KVA TRANSFORMER - PAD MOUNTED	$4,150	$3,284	$76	Active	16.2
WFF	Z-053	45 KVA TRANSFORMER - PAD MOUNTED	$4,227	$3,284	$77	Active	16.2
DSN	006	SAFETY TECHNICIAN WORKSHOP	$13,083	$2,195	$141	Active	23
DSN	007	TIMBER STORE BLDG	$5,623	$1,042	$0	Active	9
DSN	008	FLAMMABLE MATERIALS STORE	$13,083	$2,195	$0	Active	8
DSN	010	RIVER PUMP CONTROL BLDG	$13,083	$2,195	$126	Active	19.1
DSN	021	FACILITY STORES	$21,153	$3,920	$32	Active	8
DSN	036	Sub Reflector Shelter	$3,324	$2,400	$9	Active	25
DSN	036	Sub Reflector Shelter	$3,263	$2,400	$57	Active	25
DSN	038	Paint, Spray, Garden storage	$0		$0		0
DSN	044	Carport (Canteen, Visitors Center)	$2,434	$1,999	$0	Active	25
DSN	044	Carport (Canteen, Visitors Center)	$2,390	$1,999	$7	Active	25
DSN	051	Distilled Water Prccessing	$0		$0		19.1
DSN	052	Heavy Vehicle Maintenance	$0		$0		23
DSN	053	Fire valve rm for DSS 34	$0		$0		24
DSN	054	BWG MG Shelter DSS 34	$0		$0		24
DSN	MS 10 Generator	Generator	$0		$0		16.1
DSN	MS 12 Electrical	Electrical	$0		$0		16
DSN	MS 12 Oil spill	Oil Spill	$0		$0		24
DSN	MS 12 Roads	Roads	$0		$0		21
DSN	MS 12 Sewer	Sewer	$0		$0		18
DSN	MS 12 Water	Water Storage	$0		$0		10.1
DSN	MS 12 Water	Water System	$0		$0		18
DSN	MS-15	Fuel Storage Tanks	$0		$0		10
DSN	ST 13	Electrical Transformer	$0		$0		16.2
DSN	ST19	S-BAND ACK AND COLLIMATION TOWER	$2,188	$1,450	$2	Active	13
DSN	ST19	S-BAND ACK AND COLLIMATION TOWER	$2,149	$1,450	$11	Active	13
DSN	ST4	COLLIMATION TOWER	$14,901	$2,500	$748	Active	13
DSN	Airplane Runway	Airplane Runway	$0		$0		21
DSN	Anemom. Poles	Anemom. Poles	$0		$0		16
DSN	Apollo Park Lot	Apollo Park Lot	$0		$0		21
DSN	Camera posts	Camera posts	$0		$0		24
DSN	DSS-16	Antenna	$0		$0		13.2
DSN	Echo ParkingLot	Parking Lot	$0		$0		21
DSN	Electrical	Electrical System	$0		$0		16
DSN	Fiber Optic Sys	Fiber Optic System	$0		$0		25
DSN	Fire Protect	Fire Protection System	$0		$0		19
DSN	Fueling Station	Fuel Station	$0		$0		10.2
DSN	G-100	Utility Building	$0		$0		0
DSN	G-201	Operations Building, USB	$0		$0		0
DSN	G-202(A-2)	Excess Storage Building	$0		$0		0

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
DSN	G-203(A-3)	26 Meter Antenna Building	$0		$0		0
DSN	G-204(A-4)	26 Meter Ant. Collimation Tower	$0		$0		0
DSN	G-205(A-5)	Hydraulic Repair Building	$0		$0		0
DSN	G-206	Telephone Equipment Building (GTE)	$0		$0		0
DSN	G-207	9 Meter Antenna	$0		$0		13.2
DSN	G-208(A-8)	9 Meter Ant. Collimation Tower	$0		$0		0
DSN	G-209	Hazardous Material Drum Storage	$0		$0		0
DSN	G-212	Fire Pump House	$0		$0		0
DSN	G-214(A14)	Utility Building	$0		$0		0
DSN	G-234	M.G. Enclosure	$0		$0		0
DSN	G-235	Frequency and Timing Room	$0		$0		25
DSN	G-245	Rest Room	$0		$0		0
DSN	G-246	Rest Room	$0		$0		0
DSN	G-301(M-1)	MiniTrack Building (MBS)	$0		$0		0
DSN	G-302(M-2)	Logistics (MBS)	$0		$0		0
DSN	G-305(M-5)	Collimation Tower (MBS)	$0		$0		0
DSN	G-306(M-6)	Telemetry (MBS)	$0		$0		0
DSN	G-40	FLAMMABLE STORAGE	$12,649	$2,500	$176	Active	9
DSN	G-44	STORAGE/DOCK	$17,179	$3,937	$405	Active	9
DSN	G-46A	Antenna Shop (MTC)	$0		$0		0
DSN	G-46B	Shop/JPL (MTC Yard)	$0		$0		0
DSN	G-56	UTILITY BLDG.	$30,901	$4,926	$813	Active	23
DSN	G-65	POLE BEACON TOWER	$3,147	$1,000	$130	Active	13
DSN	G-65	POLE BEACON TOWER	$3,206	$1,000	$0	Active	13
DSN	G-66	POLE BEACON TOWER	$3,147	$1,000	$130	Active	13
DSN	G-66	POLE BEACON TOWER	$3,206	$1,000	$0	Active	13
DSN	G-87	UTILITY BLDG.	$15,886	$3,000	$3,668	Mothballed	23
DSN	G-93	COMPLEX SECURITY BLDG	$14,166	$2,800	$123	Active	24
DSN	Hydraulic Oil Pit	Hydraulic Oil Pit	$0		$0		10.1
DSN	M-12	ATS L-Band Building (MBS)	$0		$0		0
DSN	M-13	TGS L-Band Building (VLBI) (MBS)	$0		$0		0
DSN	Mars Parking Lot	Parking Lot	$0		$0		21
DSN	MS-8	ATS Operations Building (VLBI)(MBS)	$0		$0		0
DSN	MS-9	Power House	$0		$0		16.1
DSN	Oxidation Ponds	Oxidation Pond	$0		$0		25
DSN	Perimeter Fence	Perimeter Fence	$0		$0		25
DSN	Roadways	Roadways	$0		$0		21
DSN	Sewage System	Sewage System	$0		$0		18
DSN	Site Signage	Signage	$0		$0		25
DSN	Venus Parking Lot	Parking Lot	$0		$0		21
DSN	Water System	Water System	$0		$0		19
DSN	Water Tank 1	Water Tank	$0		$0		10.1
DSN	Water Tank 2	Water Tank	$0		$0		10.1
DSN	Water Tank 3	Water Tank	$0		$0		10.1
DSN	Water Tank 4	Water Tank	$0		$0		10.1
DSN	Water Tank 5	Water Tank	$0		$0		10.1
DSN	Water Tank 6	Water Tank	$0		$0		10.1
DSN	600	COLLIMATION BUILDING	$25,885	$4,992	$720	Active	12

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
DSN	New13	690-20 Memorial and access to the complex	$3,309		$33		25
DSN	New14	690-20 Monument.	$1,502		$2		25
DSN	New23	Monument. 690-20	$1,502		$2		25
JPL	143	SOLID ROCKET DOCK	$10,190	$1,260	$344	Active	9
JPL	145	MAGIZINE - PROPELLANT	$26,212	$3,097	$181	Active	11
JPL	195	GUARD SHELTER	$6,898	$1,177	$160	Active	24
JPL	196	GUARD SHELTER	$6,506	$997	$0	Active	24
JPL	220	ICS TERMINAL	$25,434	$4,267	$402	Active	12
JPL	225	GUARD SHELTER	$6,589	$1,026	$700	Active	24
JPL	226	SOLVENT STORAGE	$17,246	$2,742	$469	Active	9
JPL	227	GUARD SHELTER	$6,422	$1,000	$0	Active	24
JPL	252	GUARD SHELTER	$6,141	$1,000	$136	Active	24
JPL	257	MAIN GUARD SHELTER	$26,141	$4,658	$578	Active	24
JPL	262	RADIOMETER	$4,967	$1,000	$218	Active	1
JPL	262	RADIOMETER	$5,059	$1,000	$297	Active	1
JPL	274	COOLING TOWER	$20,238	$4,000	$0	Active	17.1
JPL	320	40X40 Storage Bldg	$0		$0		0
JPL	35	Repeater (Radio)	$0		$0		0
JPL	87	PROPELLANT CONDITIONING LABORATORY	$39,326	$2,975	$1,801	Active	1
JPL	COMPAIRSYS	Compressor Air System	$0		$0		0
JPL	T1021	Trailer	$9,735	$2,608	$1,248	Active	7
JPL	T1028	Trailer	$2,448	$2,300	$46	Active	7
JPL	T1028	Trailer	$2,494	$2,300	$320	Active	7
JPL	T1044	Trailer	$2,103	$1,940	$241	Active	7
JPL	T1044	Trailer	$2,065	$1,940	$237	Active	7
JPL	T1054	Trailer	$2,021	$1,899	$19		7
JPL	T1054	Trailer	$2,059	$1,899	$38		7
JPL	T1058	Trailer	$8,286	$1,899	$934		7
JPL	T1063	Trailer	$9,233	$2,116	$1,184		7
JPL	T1074	Trailer	$8,256	$1,892	$1,058		7
JPL	T1076	Trailer	$8,374	$1,919	$944		7
JPL	T1079	Trailer	$8,862	$2,031	$163		7
JPL	T1081	Trailer	$6,222	$1,426	$701		7
JPL	T1082	Trailer	$6,222	$1,426	$714		7
JPL	T1086	Trailer	$6,148	$1,409	$788		7
JPL	T1087	Trailer	$8,212	$1,882	$1,053		7
JPL	T1089	Trailer	$7,326	$1,679	$939		7
JPL	T1102	Trailer	$5,494	$1,259	$619		7
JPL	T1128	Trailer	$6,087	$1,395	$659		7
JPL	T1129	Trailer	$6,707	$1,537	$849		7
JPL	T1132	Trailer	$5,926	$1,358	$564		7
JPL	T1143	Trailer	$7,457	$1,709	$840		7
JPL	T1149	Trailer	$7,370	$1,689	$0		7
JPL	T1152	Trailer	$7,370	$1,689	$263		7
JPL	T1153	Trailer	$7,370	$1,689	$831		7
JPL	T1162	Trailer	$7,601	$1,742	$442		7
JPL	T1167	Trailer	$7,370	$1,689	$831		7
JPL	T1168	Trailer	$7,527	$1,725	$965	Active	7

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
JPL	T1170	Trailer	$7,370	$1,689	$831		7
JPL	T1171	Trailer	$7,448	$1,707	$0		7
JPL	T1182	Trailer	$7,601	$1,742	$525		7
JPL	T1194	Trailer	$8,539	$1,957	$962		7
JPL	T1198	Trailer	$17,210	$3,944	$0		7
JPL	T1201	Trailer	$7,370	$1,689	$263		7
JPL	T1202	Trailer	$4,761	$1,091	$610	Active	7
JPL	T1202	Trailer	$4,674	$1,091	$150	Active	7
JPL	T1213	Trailer	$7,370	$1,689	$845		7
JPL	T1215	Trailer	$10,542	$2,416	$1,188		7
JPL	T1300	Trailer	$17,868	$4,095	$1,699		7
JPL	T1301	Trailer	$9,517	$2,181	$177		7
JPL	T1302	Trailer	$21,460	$4,918	$0		7
JPL	T1304	Trailer	$12,305	$2,820	$226		7
JPL	T1305	Trailer	$16,066	$3,682	$0	Active	7
JPL	T1724	Mars Modular 1722 Restroom	$0	$0	$0	Active	7
JPL	T1724	Mars Modular 1722 Restroom	$25,920	$0	$0	Active	7
JPL	T1725	Mars Modular 1723 Restroom	$0	$0	$0	Active	7
JPL	T1725	Mars Modular 1723 Restroom	$25,920	$0	$0	Active	7
TBLMTN	TM-24A	Daytime telescope	$0		$0		25
TBLMTN	TM-29	OPTICAL COMMUNICATION TELESCOPE	$0		$0		0
TBLMTN	TM-Fence	Fence	$0		$0		25
TBLMTN	TM-LN	Liquid Nitrogen Station	$0		$0		10
TBLMTN	TM-Roads	Roads & Parking Lots	$0		$0		21
DWNY	0001	OFFICE FACTORY, LAB	$0		$0	Abandoned	23.1
DWNY	0006	ENGINEERING AND SUPPORT	$0		$0	Abandoned	1
DWNY	0009	CAFETERIA	$0		$0	Abandoned	24
DWNY	0010	PLANT SERVICES BUILDING	$0		$0	Abandoned	23
DWNY	0011	BONDED WAREHOUSE	$0		$0	Abandoned	8
DWNY	0014	FIRE STATION, B/56	$0		$0	Abandoned	24
DWNY	0025	STORAGE	$0		$0	Abandoned	8
DWNY	0036	PUMP HOUSE	$0		$0	Abandoned	23
DWNY	0039	OFFICE LAB & TEST EQUIPMENT STORAGE	$0		$0	Abandoned	8
DWNY	0041	MODEL SHOP & MFG. SUPPORT	$0		$0	Abandoned	1
DWNY	0042	MAINTENANCE OFFICE & GARAGE	$0		$0	Abandoned	23
DWNY	0056	ULTRAHIGH TEMPERATURE TEST FACILITY	$0		$0	Abandoned	1
DWNY	0061	TUB CLEANING/PLATING FACILITY	$0		$0	Abandoned	23
DWNY	0101	PRODUCTION CONTROL	$0		$0	Abandoned	23.1
DWNY	0114	MAINTENANCE YARD OFFICE	$0		$0	Abandoned	23
DWNY	0118	TOOL FABRICATION	$0		$0	Abandoned	1
DWNY	0119	CENTRAL UTILITY AREA, BLDG. 1	$0		$0	Abandoned	23
DWNY	0120	MATERIALS TESTING LABORATORY	$0		$0	Abandoned	1
DWNY	0123	PYROTECHNIC TEST LABORATORY	$0		$0	Abandoned	1
DWNY	0125	BOMB SHELTER (REINFORCED CONCRETE STRUCTURE)	$0		$0	Abandoned	9
DWNY	0126	HAZARDOUS STORAGE	$0		$0	Abandoned	9
DWNY	0127	STORAGE	$0		$0	Abandoned	8
DWNY	0128	STORAGE	$0		$0	Abandoned	8
DWNY	0130	BOMB SHELTER (HAZARDOUS TEST LAB.)	$0		$0	Abandoned	1

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
DWNY	0134	X-RAY INSPECTION	$0		$0	Abandoned	1
DWNY	0143	PUMP HOUSE	$0		$0	Abandoned	23
DWNY	0213	MOTOR POOL OFFICE	$0		$0	Abandoned	23
DWNY	0221	COMPRESSOR ROOM	$0		$0	Abandoned	23
DWNY	0229	HYDRAULIC SUPPORT LABORATORY	$0		$0	Abandoned	1
DWNY	0239	BOILERS AND SERVICE	$0		$0	Abandoned	1
DWNY	0244	STORAGE/TOOL CONTROL	$0		$0	Abandoned	8
DWNY	0255	ELECTRIC POWER STATION	$0		$0	Abandoned	23
DWNY	0260	UNDERGROUND PNEUMATIC TEST CELL	$0		$0	Abandoned	4
DWNY	0262	STORAGE STRUCTURE-ATT. TO BLDG 114	$0		$0	Abandoned	8
DWNY	0265	MAIN ELECTRIC POWER STATION	$0		$0	Abandoned	23
DWNY	0276	GOLD PLATE PROCESSING	$0		$0	Abandoned	23
DWNY	0277	PROCESSING METAL CLEANING	$0		$0	Abandoned	23
DWNY	0279	ELECTRICAL VAULT	$0		$0	Abandoned	23
DWNY	0282	GATE HOUSE, GATE 11	$0	$787	$0	Abandoned	24
DWNY	0286	CRYOGENIC FACILITY	$0		$0	Abandoned	1
DWNY	0287	BONDING, TEST, PROCESSING & PLASTIC	$0		$0	Abandoned	23.1
DWNY	0288	SPACE SYSTEMS DEVELOPMENT LAB	$0		$0	Abandoned	1
DWNY	0289	SPACE SYSTEMS LAB TEST CELLS	$0		$0	Abandoned	1
DWNY	0290	SYSTEMS INTEGRATION & CHECKOUT	$0		$0	Abandoned	1
DWNY	0292	TUBING FABRICATION	$0		$0	Abandoned	23
DWNY	0298	PNEUMATIC LAB/TEST CELL/CONTROL RM	$0		$0	Abandoned	4
DWNY	0299	PRESSURIZATION SYS DEVELOPMENT LAB	$0		$0	Abandoned	1
DWNY	0723	CANOPY, METAL	$0		$0	Abandoned	9
DWNY	0764	WOOD CANOPY STORAGE	$0	$5,000	$0	Abandoned	9
DWNY	0766	METAL SHED STORAGE MOVEABLE	$0	$1,500	$0	Abandoned	9
DWNY	0771	METAL CANOPY LUNCH	$0		$0	Abandoned	24
DWNY	0772	METAL CANOPY LUNCH	$0		$0	Abandoned	24
DWNY	0773	METAL CANOPY LUNCH	$0	$2,000	$0	Abandoned	24
DWNY	0777	METAL CANOPY LUNCH	$0	$1,500	$0	Abandoned	24
DWNY	0778	METAL CANOPY LUNCH	$0	$1,500	$0	Abandoned	24
DWNY	0779	METAL CANOPY LUNCH	$0	$1,500	$0	Abandoned	24
DWNY	0780	METAL CANOPY LUNCH	$0		$0	Abandoned	24
DWNY	0781	METAL CANOPY LUNCH	$0	$1,500	$0	Abandoned	24
DWNY	0782	METAL CANOPY LUNCH	$0	$1,500	$0	Abandoned	24
DWNY	0783	METAL CANOPY LUNCH	$0	$1,000	$0	Abandoned	24
DWNY	0784	METAL CANOPY LUNCH	$0	$1,500	$0	Abandoned	24
DWNY	0785	METAL CANOPY LUNCH	$0	$1,500	$0	Abandoned	24
DWNY	1000	FIRE PROTECTION SYSTEMS	$0		$0	Abandoned	19
DWNY	1001	ELECTRICAL SYSTEM	$0		$0	Abandoned	16
DWNY	1002	SEWER SYSTEM	$0		$0	Abandoned	18
DWNY	1003	NATURAL GAS SYSTEM	$0		$0	Abandoned	10
DWNY	1005	EXTERIOR LIGHTING	$0		$0	Abandoned	15
DWNY	1006	DRAINAGE SYSTEM	$0		$0	Abandoned	18.2
DWNY	1007	PAVING	$0		$0	Abandoned	21
DWNY	1008	PARKING LOT	$0		$0	Abandoned	21
DWNY	1021	DATA CABLING (DNY BLDG 288 TO B/290	$0	$4,668	$0	Abandoned	13
ELLFLD	138	FLAMMABLE STORAGE SHED	$4,779	$300	$625	Active	9

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
ELLFLD	138	FLAMMABLE STORAGE SHED	$4,692	$300	$1,287	Active	9
ELLFLD	140a	STORAGE BUILDING NO. 1	$5,574	$3,710	$104	Active	8
ELLFLD	140b	FIRE SUPPRESSION STORAGE BUILDING	$3,356	$2,275	$62	Active	8
ELLFLD	140b	FIRE SUPPRESSION STORAGE BUILDING	$3,418	$2,275	$64	Active	8
JSC	031N	LUNAR ROCK SAMPLE STORAGE AND ANALYSIS LAB	$0		$0	Active	0
JSC	032A	BLDG CONVERTED TO STORAGE	$0		$0	Active	0
JSC	032K	GAS CYLINDER STORAGE SHED (ARGON, NITROGEN, OXYGEN	$23,290	$4,150	$233	Active	9
JSC	037B	VAPORIZER EQUIPMENT BUILDING	$2,597	$675	$198	Active	24
JSC	037B	VAPORIZER EQUIPMENT BUILDING	$2,550	$675	$195	Active	24
JSC	207S	WIND DIRECTION INDICATOR	$3,519	$3,001	$0	Active	25
JSC	207S	WIND DIRECTION INDICATOR	$3,455	$3,001	$346	Active	25
JSC	207T	WIND DIRECTION INDICATOR	$3,519	$3,001	$0	Active	25
JSC	207T	WIND DIRECTION INDICATOR	$3,455	$3,001	$346	Active	25
JSC	222C	HIGH PRESSURE GAS OPERATOR STATION	$9,248	$2,657	$1,082	Active	17.1
JSC	222K	FIRE PROTECTION BUILDING	$1,486	$500	$205	Active	24
JSC	222K	FIRE PROTECTION BUILDING	$1,514	$500	$392	Active	24
JSC	322D	WIND DIRECTION INDICATOR	$4,680	$3,101	$47	Active	25
JSC	322D	WIND DIRECTION INDICATOR	$4,595	$3,101	$46	Active	25
JSC	350E	WIND DIRECTION INDICATOR	$4,663	$3,147	$466	Active	25
JSC	350E	WIND DIRECTION INDICATOR	$4,750	$3,147	$475	Active	25
JSC	351N	WIND DIRECTION INDICATOR	$3,519	$3,001	$35	Active	25
JSC	351N	WIND DIRECTION INDICATOR	$3,455	$3,001	$0	Active	25
JSC	352A	PYROTECHNICS TEST CELLS	$29,803	$5,000	$1,711	Active	1
JSC	352J	WIND DIRECTION INDICATOR	$3,455	$3,001	$35	Active	25
JSC	352J	WIND DIRECTION INDICATOR	$3,519	$3,001	$0	Active	25
JSC	415	RIGGING EQUIPMENT STORAGE BUILDING	$24,553	$4,550	$4,572	Active	8
JSC	843	SEWAGE LIFT STATION NO. 4, (25 GPM)	$20,363	$3,500	$1,955	Active	18
JSC	J-2AA	WIND DIRECTION INDICATER	$3,739	$1,716	$0	Active	25
JSC	J-2AA	WIND DIRECTION INDICATER	$3,671	$1,716	$367	Active	25
JSC	T-578	PORTABLE BUILDING FOR HOUSING	$9,586	$2,916	$4,956	Active	28
JSC	T-584	PORTABLE SOLAR TEST EQUIPMENT BLDG.	$3,195	$2,022	$294	Active	28
JSC	T-584	PORTABLE SOLAR TEST EQUIPMENT BLDG.	$3,255	$2,022	$386	Active	28
PLMDALE	159C	4 legged canopy structure (like a carport)	$0		$0		25
PLMDALE	161C	4 legged canopy structure (like a carport)	$0		$0		25
PLMDALE	179C	4 legged canopy structure (like a carport)	$0		$0		25
PLMDALE	180C	4 legged canopy structure (like a carport)	$0		$0		25
PLMDALE	184C	4 legged canopy structure (like a carport)	$0		$0		25
PLMDALE	185	4 legged canopy structure (like a carport)	$0		$0		25
PLMDALE	185C	4 legged canopy structure (like a carport)	$0		$0		25
PLMDALE	189C	4 legged canopy structure (like a carport)	$0		$0		25
PLMDALE	3190	Storage Canopy	$0		$0		9
PLMDALE	3002	STORM DRAIN SERVIECLINE BLDG AG	$5,120	$2,000	$84	Active	18.2
PLMDALE	3181	CANOPY	$7,546	$5,000	$0	Active	9
PLMDALE	3183	OPERATION SHED	$823	$300	$94	Active	28
PLMDALE	3183	OPERATION SHED	$838	$300	$27	Active	28
PLMDALE	3193	STORAGE CANOPY	$7,512	$5,000	$75	Active	9
WSTF	MSBLS	SHUTTLE LANDING GUIDANCE SYSTEM	$0		$0		15
WSTF	SH-1	COMMUNICATIONS BUILDING	$0		$0		12

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
WSTF	WSSH	RUNWAY	$0		$0		21
WSTF	010	IMPLEMENTATION STORAGE BLDG. (WSGT)	$5,311	$3,934	$149	Active	8
WSTF	018	FACILITIES STORAGE BLDG (WSGT)	$2,805	$2,116	$340	Active	8
WSTF	018	FACILITIES STORAGE BLDG (WSGT)	$2,857	$2,116	$452	Active	8
WSTF	SGTGT	TUNNEL SYSTEM	$0		$0		25
WSTF	T Add 1	ISS TRAINING ANTENNA	$0		$0		13.2
WSTF	T Add 3	TUNNEL	$0		$0		0
WSTF	T Add 4	PARKING LOT	$0		$0		21
WSTF	T-15	SATELLITE TRANSMITTING SYSTEM	$0		$0		13
WSTF	T-20A	EQUIPMENT STORAGE	$0		$0		8
WSTF	T-5	STORAGE TRAILER	$0		$0		7
WSTF	101A	ELECTRICAL SUBSTATION	$0		$0		16.2
WSTF	103	FLAG POLE	$14,686	$2,335	$0	Active	25
WSTF	118	GENERAL PURPOSE STORAGE BUILDING	$24,473	$3,985	$2,927	Active	8
WSTF	136	SEWAGE POND	$0		$0		0
WSTF	162	STORAGE SHED	$0		$0		8
WSTF	200 East	ELECTRICAL SUBSTATION	$0		$0		16.2
WSTF	200S	BUILDING 200 SUBSTATION	$0		$0		16.2
WSTF	201/203	ELECTRICAL SUBSTATION	$0		$0		16.2
WSTF	250 Area 1	ELECTRICAL SUBSTATION	$0		$0		16.2
WSTF	250 Area 2	STORAGE BUILDING	$0		$0		8
WSTF	250 Area 3	STORAGE BUILDING	$0		$0		8
WSTF	250 Area 4	STORAGE BUILDING	$0		$0		8
WSTF	254	RECHARGER BUILDING	$3,143	$2,280	$21	Active	4
WSTF	254	RECHARGER BUILDING	$3,201	$2,280	$21	Active	4
WSTF	300 West	ELECTRICAL SUBSTATION	$0		$0		16.2
WSTF	300S	BUILDING 300 SUBSTATION	$0		$0		16.2
WSTF	303A	SUPPORT BUILDING	$0		$0		0
WSTF	303A	SUPPORT BUILDING	$0		$0		0
WSTF	319	STAND SUPPORT BUILDING	$15,520	$4,250	$214	Active	4
WSTF	323	STORAGE BUILDING	$0		$0		8
WSTF	329	CAMERA TOWER	$0		$0		0
WSTF	329	CAMERA TOWER	$0		$0		0
WSTF	400-1	BUNKER #1	$0		$0		0
WSTF	400-1	BUNKER #1	$0		$0		0
WSTF	400-2	BUNKER #2	$0		$0		0
WSTF	400-2	BUNKER #2	$0		$0		0
WSTF	434-1	NITROGEN RECHARGING AREA	$0		$0		0
WSTF	434-1	NITROGEN RECHARGING AREA	$0		$0		0
WSTF	434-2	OXIDIZER STORAGE AREA	$0		$0		0
WSTF	434-2	OXIDIZER STORAGE AREA	$0		$0		0
WSTF	437A	BATTERY STORAGE BUILDING	$0		$0		9
WSTF	440S	ELECTRICAL SUBSTATION	$0		$0		16.2
WSTF	500 Area 1	ELECTRICAL SUBSTATION	$0		$0		16.2
WSTF	500 Area 2	FUEL TREATMENT UNIT	$0		$0		0
WSTF	500 Area 2	FUEL TREATMENT UNIT	$0		$0		0
WSTF	500 Area 3	OXIDIZER STORAGE PAD	$0		$0		21
WSTF	500 Area 4	ALCOHOL STORAGE AREA	$0		$0		21

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
WSTF	501	FUEL STORAGE CONTROL BLDG	$12,044	$4,216	$403	Active	28
WSTF	503	FUEL STORAGE SHELTER	$0		$0		0
WSTF	503	FUEL STORAGE SHELTER	$0		$0		0
WSTF	511	HYDROGEN STORAGE CONTROL BLDG.	$8,440	$1,416	$257	Active	28
WSTF	521	OXIDIZER STORAGE CONTROL BLDG.	$12,121	$4,816	$333	Active	28
WSTF	531	CRYOGENICS STORAGE CONTROL BLDG.	$8,440	$1,416	$247	Active	28
WSTF	600	WATER DISTRIBUTION SYSTEM	$0		$0		0
WSTF	600	WATER DISTRIBUTION SYSTEM	$0		$0		0
WSTF	600 Area 1	SEWAGE LAGOONS (200)	$0		$0		0
WSTF	600 Area 1	SEWAGE LAGOONS (200)	$0		$0		0
WSTF	600 Area 2	ELECTRICAL SUBSTATION	$0		$0		0
WSTF	600 Area 2	ELECTRICAL SUBSTATION	$0		$0		0
WSTF	633A	STORAGE SHED	$0		$0		8
WSTF	638A	STORAGE SHED	$0		$0		8
WSTF	639B	STORAGE SHED	$0		$0		8
WSTF	640C	STORAGE SHED	$0		$0		8
WSTF	883	AREA WARNING SYSTEM	$36,768	$2,845	$0	Active	25
WSTF	E1	ELECTRICAL DISTRIBUTION SYSTEM	$0		$0		0
WSTF	E1	ELECTRICAL DISTRIBUTION SYSTEM	$0		$0		0
WSTF	E2	MAIN ELECTRICAL SUBSTATION	$0		$0		0
WSTF	E2	MAIN ELECTRICAL SUBSTATION	$0		$0		0
WSTF	T 12-3	STORAGE BUILDING	$0		$0		8
WSTF	T-106	SECURITY FIRING RANGE STORAGE BUILDING	$0		$0		8
WSTF	T-115	PAINT STORAGE BUILDING	$10,143	$1,707	$552	Active	9
WSTF	T-161A	STORAGE BUILDING	$0		$0		8
WSTF	T-165	MCDAC TRAILER 800 AREA	$11,785	$2,100	$1,188	Active	7
WSTF	T-203A	SHOP BUILDING	$0		$0		23
WSTF	T-211	GENERAL PURPOSE BUILDING	$10,088	$1,734	$908	Active	28
WSTF	T-251	TEST FACILITY BUILDING	$8,469	$3,250	$227	Active	1
WSTF	T-253	ELECTRICAL STORAGE BUILDING	$0		$0		8
WSTF	T-270A	TEST BUILDING	$0		$0		2
WSTF	T-272	STORAGE BUILDING	$0		$0		8
WSTF	T-275A	STORAGE BUILDING	$0		$0		8
WSTF	T-363	STORAGE BUILDING	$0		$0		8
WSTF	T634A	JANITORIAL STORAGE BUILDING	$0		$0		8
CCAFS	1207AA	CAMERA PADS	$5,693	$1,233	$57	Active	20.1
CCAFS	1207BB	SECONDARY OVERHEAD	$22,665	$2,914	$0	Active	16
CCAFS	1207GG	STORM DRAINAGE SYSTEM	$23,458	$3,016	$235	Active	18.2
CCAFS	1207S	SEPTIC TANK	$8,727	$1,122	$339	Active	18.1
CCAFS	1207W	WATER WELL N/POT	$9,334	$1,200	$12,648	Active	19
CCAFS	19015	NITRO TUBE BANK FILL STAT/LC-19	$3,505	$1,369	$768	Abandoned	10
CCAFS	19015	NITRO TUBE BANK FILL STAT/LC-19	$3,441	$1,369	$76	Active	10
CCAFS	54945	HAZARDOUS WASTE STAG. FAC.	$6,101	$4,153	$270	Active	9
CCAFS	66237	HAZARDOUS WASTE STAG. FAC.	$6,580	$4,360	$65	Active	9
CCAFS	73003	SEPTIC TANK	$3,100		$44		18
CCAFS	77609	SENTRY HOUSE	$20,785	$3,487	$4,263	Active	24
CCAFS	77630	SCALES EQUIPMENT BUILDING	$4,140		$400		23
KSC	66246	Contaminated Water Tank	$0		$0	ID Only	19

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
KSC	66256	Waste Water Tank	$0		$0	ID Only	19
KSC	G5-1061A	Equipment Building	$0		$0	ID Only	13
KSC	H5-1113	North PAPI Lights, 7.5K'	$0		$0	ID Only	15
KSC	H5-1315	North PAPI Lights, 6.5K'	$0		$0	ID Only	15
KSC	H5-1434B	POLE SHED	$12,109	$4,000	$331	Active	25
KSC	H5-2324	MSBLS Monitor, North R/W 33	$0		$0	ID Only	12
KSC	H7-1681	LIFEGUARD BUILDING (NPS)	$28,864	$4,700	$1,821	Active	24
KSC	J5-0132	Meteorological Site #5	$0		$0	ID Only	12
KSC	J5-0341	Ascent Wind Profiler	$0		$0	ID Only	0
KSC	J5-0533	MSBLS Monitor, North R/W 15	$0		$0	ID Only	12
KSC	J5-1195	DIFFERENTIAL GLOBAL POSITIONING BLDG	$0		$0	FACD	0
KSC	J5-2050	MSBLS Monitor, South R/W 33	$0		$0	ID Only	12
KSC	J6-0306	EQUIPMENT SHELTER (C-BAND)	$8,075	$1,388	$157	Active	9
KSC	J6-0490C	Equipment Shelter	$0		$0	ID Only	2
KSC	J6-2024	Guard House	$0		$0	ID Only	24
KSC	J6-2409	Meteorological Site #4	$0		$0	ID Only	12
KSC	J7-0132A	LOX OFFICE BUILDING PAD B	$0		$0	FACD	0
KSC	J7-0337I	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	J7-0337J	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	J7-0689	PAD B OPERATIONS SUPPORT BLDG	$0		$0	FACD	0
KSC	J7-1287	Guard House	$0		$0	ID Only	24
KSC	J7-1388B	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	J7-1388C	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	J8-0956	Guard House	$0		$0	ID Only	0
KSC	J8-1503B	LOX ENGINEERING OFFICE BUILDING PAD A	$0		$0	FACD	0
KSC	J8-1614A	LH2 ENGINEERING OFFICE BUILDING PAD A	$0		$0	FACD	0
KSC	J8-1708J	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	J8-1708K	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	J8-2126	Guard House	$0		$0	ID Only	24
KSC	J8-2227	No longer a NASA property	$0		$0	FABO	0
KSC	J8-2228	No longer a NASA property	$0		$0	FABO	0
KSC	K6-0258	MSBLS Monitor, South	$0		$0	ID Only	12
KSC	K6-0445	CONTRACTOR SUPPORT BLDG. NO. 4	$28,150	$4,479	$904	Active	8
KSC	K6-0696B	TURNSTILE SHELTER	$0		$0	FACD	0
KSC	K6-0696C	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	K6-0696D	ENVIRONMENTAL CONTROL BUILDING	$0		$0	FACD	0
KSC	K6-0696E	TURNSTILE SHELTER	$0		$0	FACD	0
KSC	K6-0743A	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	K6-0743B	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	K6-0743C	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	K6-0791	OPF SCAPE BUILDING	$0		$0	FACD	0
KSC	K6-0792A	Chlorine Storage Building	$0		$0	ID Only	9
KSC	K6-0794B	Sand Filter Treatment Tank	$0		$0	ID Only	9
KSC	K6-0894F	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	K6-0894G	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	K6-0948	Gate House	$0		$0	ID Only	24
KSC	K6-1170	S. PAPI LIGHTS 6500 FT	$0		$0	FACD	0
KSC	K6-1323	S. PAPI LIGHTS 7500 FT	$0		$0	FACD	0

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
KSC	K6-1347A	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	K6-1446E	Drum Storage Building	$0		$0	ID Only	9
KSC	K6-1547D	CABLE REEL SHED	$24,544	$5,000	$471	Active	9
KSC	K6-1697	GAS/DM WATER PROCESSING PLANT	$0		$0	FACD	0
KSC	K6-1697A	Support Building	$0		$0	ID Only	19.1
KSC	K6-1747	HYPERGOL DECONTAMINATION BLDG	$0		$0	FACD	0
KSC	K6-1748	DRY CHEMICAL STORAGE FACILITY	$0		$0	FACD	0
KSC	K6-1847F	Generator Maintenance Shop	$0		$0	ID Only	9
KSC	K6-1996I	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	K6-1997	Astronaut Van Garage	$0		$0	ID Only	9
KSC	K6-2026	Pump House N14	$0		$0	ID Only	19
KSC	K6-2044	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	K6-2046	HURRICANE STORAGE SHELTER	$7,169	$4,750	$229	Active	9
KSC	K6-2095	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	K6-2197	VEHICLE SHED	$6,740	$4,800	$342	Active	9
KSC	K7-0042	Guard House	$0		$0	ID Only	24
KSC	K7-0140A	Guard House	$0		$0	ID Only	24
KSC	K7-0188C	Toilet Room	$0		$0	ID Only	24
KSC	K7-0287	Security Boathouse	$0		$0	ID Only	24
KSC	K7-0315	Ammonia Cylinger Storage Building	$0		$0	ID Only	8
KSC	K7-0612	POL	$25,448	$4,374	$1,196	Standby	9
KSC	K7-0851	Hazardous Waste Staging Area/Portable	$0		$0	ID Only	9
KSC	K7-0951	Gate House	$0		$0	ID Only	24
KSC	K7-1153A	STORAGE BUILDING	$0		$0	FACD	0
KSC	L5-0033	Pump House N13	$0		$0	ID Only	19
KSC	L5-1647	Pump House N10	$0		$0	ID Only	19
KSC	L6-1636	Gate House 2C	$0		$0	ID Only	24
KSC	L7-0989	GN2 CONTROL BUILDING	$5,742	$4,000	$74	Active	6
KSC	L7-1759	Equipment Shelter	$0		$0	ID Only	8
KSC	M3-0001	GATE HOUSE NO. 3	$27,635	$4,750	$2,117	Active	24
KSC	M5-1543	Antenna #1	$0		$0	ID Only	13
KSC	M5-1547	Antenna #2	$0		$0	ID Only	13
KSC	M5-1586	Pump House N8	$0		$0	ID Only	19
KSC	M5-1586A	Pump House N9	$0		$0	ID Only	19
KSC	M5-1594A	Hazardous Waste Staging Building	$0		$0	ID Only	9
KSC	M6-0166	Pump House N11	$0		$0	ID Only	19
KSC	M6-0211A	External Tanks and Solid Rocket Mockup	$0		$0	ID Only	25
KSC	M6-0240	Gate 2B	$0		$0	ID Only	24
KSC	M6-0409N	Entrance Ticket Booth	$0		$0	ID Only	25
KSC	M6-0456	Battery Storage Shed	$0		$0	ID Only	8
KSC	M6-0486A	LOADING DOCK	$9,260	$1,650	$978	Active	25
KSC	M6-0488	HURRICANE STORAGE SHELTER	$7,169	$4,750	$457	Active	9
KSC	M6-0502	Storage Yard	$0		$0	ID Only	9
KSC	M6-0505	TOUR BUS FUELING FACILITY	$9,686	$4,830	$131	Active	10.2
KSC	M6-0505A	Gas Storage	$0		$0	ID Only	10
KSC	M6-0506	ROADS & GROUNDS MAINTENANCE NO. 2	$9,886	$1,954	$280	Active	23
KSC	M6-0537	STORAGE & SALVAGE OFFICE	$23,505	$4,040	$1,312	Active	9
KSC	M6-0555	Nursery	$0		$0	ID Only	25

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
KSC	M6-0595B	POL STORAGE	$6,816	$1,562	$0	Active	8
KSC	M6-0689C	Air Compressor Storage Building	$0		$0	ID Only	8
KSC	M6-0744A	HAZARDOUS WASTE STAGING AREA	$6,101	$4,153	$1,557	Active	9
KSC	M6-0791A	LOADING DOCK	$19,193	$3,220	$1,977	Mothballed	25
KSC	M6-0880	GSA Seized Property Area	$0		$0	ID Only	8
KSC	M6-0894C	POL Shed	$0		$0	ID Only	9
KSC	M6-0934	Gate 2A	$0		$0	ID Only	24
KSC	M6-1757	Pump House N6	$0		$0	ID Only	19
KSC	M7-0353	O&C GUARD SHACK	$0		$0	ID Only	0
KSC	M7-0360A	Hazardous Waste Staging Area	$0		$0	ID Only	9
KSC	M7-0361A	AMMONIA VAPOR CONTAINMENT BLDG	$0		$0	FACD	0
KSC	M7-0459A	Guard House	$4,850		$29		25
KSC	M7-1059	HMF SUPPORT BUILDING #2	$0		$0	FACD	0
KSC	M7-1061B	Line-of-Sight Antenna	$0		$0	ID Only	13
KSC	M7-1211	Cooling Tower	$0		$0	ID Only	17.1
KSC	M7-1357A	Line-of-Sight Antenna	$0		$0	ID Only	13
KSC	M7-1460	LIQUID HYDROGEN PAD	$23,054	$4,312	$802	Mothballed	9
KSC	M7-1461	LIQUID HYDROGEN PAD	$53,077	$4,912	$3,381	Mothballed	9
KSC	M7-1469C	POL Shed	$0		$0	ID Only	9
KSC	M7-1469D	Storage Shed	$0		$0	ID Only	8
KSC	M7-1469F	Cooling Tower	$0		$0	ID Only	17.1
KSC	M8-2230	Bridge - NASA Causeway East	$0		$0	Active	21
KSC	N6-0065	Equipment Shelter	$0		$0	ID Only	8
KSC	N6-0107	Pump House N5	$0		$0	ID Only	19
KSC	N6-0146	Pump House N2	$0		$0	ID Only	19
KSC	N6-0407	Pump House N3	$0		$0	ID Only	19
KSC	TR1-224	PACEMAKER	$10,973	$1,841	$0	Active	7
KSC	TR1-474	TOUCHTON (BOXCAR)	$3,416	$2,000	$1,140	Active	7
KSC	TR1-474	TOUCHTON (BOXCAR)	$3,479	$2,000	$382	Active	7
KSC	TR1-475	TOUCHTON (BOXCAR)	$6,541	$3,760	$676	Active	7
KSC	TR1-476	TOUCHTON (BOXCAR)	$6,543	$3,761	$677	Active	7
KSC	TR1-477	TOUCHTON (BOXCAR)	$3,479	$2,000	$429	Active	7
KSC	TR1-477	TOUCHTON (BOXCAR)	$3,416	$2,000	$1,247	Active	7
KSC	TR1-712	RHODE ISLAND	$4,507	$3,000	$495	Active	7
KSC	TR1-712	RHODE ISLAND	$4,425	$3,000	$1,575	Active	7
KSC	TR1-751	MOBILE FIELD OFFICE	$3,912	$2,950	$363	Active	7
KSC	TR1-751	MOBILE FIELD OFFICE	$3,840	$2,950	$784	Active	7
KSC	TR1-752	MOBILE FIELD OFFICE	$4,840	$3,650	$46	Active	7
KSC	TR1-752	MOBILE FIELD OFFICE	$4,752	$3,650	$2,309	Active	7
KSC	TR3-034	Trailer	$0		$0	0	0
KSC	TR6-094	RESTROOM TRAILER	$0		$0	0	0
KSC	TRM4-102	Trailer	$0		$0	ID Only	0
KSC	TRM4-104	Trailer	$0		$0	ID Only	0
TALS	F5-2158	PUMP STATION	$0		$0	ID Only	19
TALS	H5-2144	Gate House 4B	$0		$0	ID Only	24
TALS	J5-1094	Remote Satellite Measurement Unit "A"	$0		$0	ID Only	12
TALS	J5-1095	Remote Satellite Measurement Unit "B"	$0		$0	ID Only	12
TALS	J5-1144	Meteorological Site #3	$0		$0	ID Only	12

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
TALS	J5-1145	Remote Satellite Measurement Unit "C"	$0		$0	ID Only	12
TALS	J6-2076	Launch Viewing Area	$0		$0	ID Only	25
TALS	J6-2077	Trailer near Banana River Viewing Site	$0		$0	Pending	7
TALS	K6-0015	CONVOY STAGING FACILITY	$0		$0	FACD	21
TALS	M7-0355D	ELECTRICAL MOTOR CONTROL BLDG	$0		$0	FACD	24
TALS	M7-0459A	Guard House	$0		$0	ID Only	24
TALS	M7-0556A	POL Building	$0		$0	ID Only	9
TALS	M7-0556B	Hazardous Waste Staging Building	$0		$0	ID Only	9
TALS	TR1-705	Trailer	$0		$0	AIP	7
TALS	TR1-706	Trailer	$0		$0	AIP	7
TALS	TRM4-100	Trailer	$0		$0	ID Only	7
TALS	TRM4-101	Trailer	$0		$0	ID Only	7
TALS	TRM4-103	Trailer	$0		$0	ID Only	7
TALS	TRM4-105	Trailer	$0		$0	ID Only	7
TALS	TAL-009	GAMBIA/UTILITIES (FIRE ALARM SYS)	$6,088	$5,000	$64	Active	19
LaRC	1161C	metal storage shed	$0		$0		8
LaRC	1161D	metal storage shed	$0		$0		8
LaRC	1209T1	FACILITIES PLANNING (T109)	$20,849	$3,395	$8,415	Active	7
LaRC	1212D	Storage Facility	$0		$0		0
LaRC	1212D	Storage Facility	$0		$0		0
LaRC	1224T1	SAER CONTR HOUSING - RMS 100 (T120)	$646,641	$5,000	$82,899	Active	7
LaRC	1226B	TIME CAPSULE	$0	$0	$0	Active	25
LaRC	1226B	TIME CAPSULE	$0	$0	$0	Active	25
LaRC	1236T1	CONST MANAGEMENT@ NTF (T129)	$3,867	$3,395	$72	Active	7
LaRC	1236T1	CONST MANAGEMENT@ NTF (T129)	$3,796	$3,395	$1,934	Active	7
LaRC	1237T7	RESTROOM NOS. 114 & 115 (T132)	$0	$0	$0	Active	7
LaRC	1237T7	RESTROOM NOS. 114 & 115 (T132)	$0	$0	$0	Active	7
LaRC	1244T3	FLIGHT INSTR SUPP - RMS 300 (T140)	$5,277	$4,500	$99	Active	7
LaRC	1250T1	ATMOSPH SCI CONTR FAC-RMS 100 (T142)	$16,882	$4,850	$5,500	Active	7
LaRC	1261A	FILTER PLANT BUILDING NO. 2	$27,264	$4,574	$40,896	Active	19.1
LaRC	1265T1	8' HIGH TEMP TUN SUPP FAC (T147)	$5,277	$4,500	$99	Active	7
LaRC	1265T2	8'HIGH TEMP TUN SUPP FAC (T148)	$5,277	$4,500	$605	Active	7
LaRC	1265T3	PROCUREMENT & RESTROOMS (T149)	$777	$0	$66	Active	7
LaRC	1265T3	PROCUREMENT & RESTROOMS (T149)	$763	$0	$964	Active	7
LaRC	1279T1	JOHNSON CONTROLS SUPP FAC (T152)	$4,883	$4,164	$488	Active	7
LaRC	1279T1	JOHNSON CONTROLS SUPP FAC (T152)	$4,794	$4,164	$6,055	Active	7
LaRC	1291	PUMP STATION	$6,422	$1,000	$323	Active	18
LaRC	1292B	BUILDING TRADES STORAGE B	$0	$0	$0	Active	9
LaRC	1292B	BUILDING TRADES STORAGE B	$0	$0	$0	Active	9
LaRC	1297B	EXTERNAL AFFAIRS STORAGE FACILITY	$17,301	$3,965	$436	Active	8
LaRC	1298T2	HYPER-X OFFICES - RMS 200 (T153)	$4,483	$3,750	$5,662	Active	7
LaRC	1298T2	HYPER-X OFFICES - RMS 200 (T153)	$4,566	$3,750	$2,355	Active	7
LaRC	1298T3	HYPER-X OFFICES - RMS 300 (T154)	$4,566	$3,750	$2,355	Active	7
LaRC	1298T3	HYPER-X OFFICES - RMS 300 (T154)	$4,483	$3,750	$5,662	Active	7
LaRC	1298T4	PROCUREMENT - RMS 400 (T155)	$5,277	$4,500	$2,722	Active	7
LaRC	1299T2	OFF OF ED - RMS 100-200 (T156 & T157)	$4,133	$3,524	$530	Active	7
LaRC	1299T2	OFF OF ED - RMS 100-200 (T156 & T157)	$4,057	$3,524	$5,148	Active	7
LaRC	1299T3	OSEMA SUPP OFFICES - RMS 300 (T158)	$21,817	$5,000	$2,797	Active	7

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
LaRC	1299T4	OSEMA SUPP OFF - RMS 400 (T159)	$7,546	$5,000	$140	Active	7
LaRC	1299T5	EXTL AFF SUPP & OPT DISP SERV (T160)	$4,616	$3,200	$5,857	Active	7
LaRC	1299T5	EXTL AFF SUPP & OPT DISP SERV (T160)	$4,701	$3,200	$603	Active	7
LaRC	1299T9	Mens and Women's Restroom, trailer	$0		$0		7
LaRC	1312	AIR FORCE LIAISON OFFICE (AIR FORCE)	$0	$0	$0	Active	5
LaRC	1321	NASA GUARD HOUSE	$0	$0	$0	Active	24
MAF	077-23	TRANSFORMER BANK NO. 23	$13,550	$3,755	$0	Active	16.2
MAF	077-27	TRANSFORMER BANK NO. 27	$2,525	$450	$46	Active	16.2
MAF	077-27	TRANSFORMER BANK NO. 27	$2,479	$450	$45	Active	16.2
MAF	077-28	TRANSFORMER BANK NO. 28	$10,693	$1,838	$196	Active	16.2
MAF	077-29	SUBSTATION NO. 29	$78,873	$4,193	$9,851	Active	16.2
MAF	077-35	TRANSFORMER BANK NO. 35	$11,322	$1,946	$207	Active	16.2
MAF	077-36	TRANSFORMER BANK NO. 36	$4,984	$1,024	$91	Active	16.2
MAF	077-36	TRANSFORMER BANK NO. 36	$5,077	$1,024	$93	Active	16.2
MAF	077-37	TRANSFORMER BANK NO. 37	$11,322	$1,946	$207	Active	16.2
MAF	077-50	TRANSFORMER BANK NO. 50	$7,512	$5,000	$137	Active	16.2
MAF	182	FLAGPOLE	$28,673	$1,800	$287	Active	25
MAF	324	WASTE OIL STORAGE	$5,620	$3,915	$128	Active	10
MSFC	4319	STORAGE BUILDING	$37,148	$2,332	$906	Active	8
MSFC	4519	LOX TRANSFER CTRL.HOUSE	$23,661	$4,130	$5,042	Mothballed	24
MSFC	4579	LWD RESERVOIR	$33,423	$4,664	$0	Abandoned	18.1
MSFC	4587	VACUUM PUMP STATION	$11,235	$1,617	$1,464	Active	24
MSFC	4598	NITROGEN GAS STORAGE FAC.	$8,787	$1,320	$0	Active	9
MSFC	4680	TEST SUPPORT BUILDING	$16,836	$3,000	$3	Active	4
MSFC	4756	STORAGE BUILDING	$16,056	$2,500	$0	Active	8
MSFC	9938	TEST WARNING SYSTEM	$11,123	$1,941	$0	Active	25
MSFC	9939	WARNING POSTS	$619	$108	$0	Active	25
MSFC	9939	WARNING POSTS	$607	$108	$0	Active	25
MSFC	9959	STORAGE AREA	$4,579	$728	$0	Active	9
MSFC	9959	STORAGE AREA	$4,495	$728	$0	Active	9
MSFC	9960	COMPRESSOR PAD	$1,830	$291	$0	Active	21
MSFC	9960	COMPRESSOR PAD	$1,797	$291	$0	Active	21
MSFC	9961	STILLING BASINS (2)	$3,094	$492	$0	Active	18.1
MSFC	9961	STILLING BASINS (2)	$3,038	$492	$0	Active	18.1
MSFC	9962	LEACHING FIELD	$9,038	$1,437	$0	Active	18.1
MSFC	9963	STORAGE TANK	$15,264	$2,427	$0	Active	10
MSFC	9971	WATER LINE	$5,799	$264	$0	Active	17
MSFC	9992	ACCESS ROAD	$18,069	$3,913	$0	Active	21
SSFL	760	Tire Shop	$0		$0		23
SSFL	IO200032	Gas Fueling Station	$0		$0		10.2
SSFL	IO200058	COCA DELTA XRAY FACILITY	$28,667	$4,000	$0	Active	12
SSFL	IO200088	SIDEWALK	$7,429	$1,000	$74	Active	21
SSFL	IO200089	VEHICLE FUELING LOCATION	$27,660	$3,723	$0	Active	10.2
SSFL	IO200093	SEWAGE COLLECTION SYSTEM	$35,832	$4,823	$0	Active	18
SSFL	IO200094	SEWAGE TREATMENT PLANT	$24,289	$3,782	$3,320	Active	18.1
SSFL	IO200102	LIQUID NITROGEN LINE	$4,925	$700	$49	Active	9
SSFL	IO200102	LIQUID NITROGEN LINE	$5,017	$700	$50	Active	9
SSFL	IO200110	ELECTRICAL SUBSTATION	$7,429	$1,000	$814	Active	16.2

Site	Facility	Description	CRV	Book Value	FAC_DM	Status	DM Category
SSFL	IO200114	BOUNDRY FENCE	$8,655	$1,165	$866	Active	25
SSFL	IO200168	DELTA INSPECTION OFFICE	$1,810	$1,700	$335	Active	12
SSFL	IO200168	DELTA INSPECTION OFFICE	$1,843	$1,700	$341	Active	12
SSFL	IO200169	LIQUID NITROGEN SHELTER-BLDG 232	$10,773	$1,450	$925	Active	24
SSFL	IO200174	STAND SHELTER-NO.739	$314,091	$1,038	$0	Active	9
SSFL	IO200178	FLAG POLE	$1,656	$227	$0	Active	25
SSFL	IO200178	FLAG POLE	$1,686	$227	$0	Active	25
SSFL	IO200179	INTERIOR FENCE	$13,595	$1,897	$1,360	Active	25
SSFL	IO200314	ELEC SUBSTATION-5000 KVA	$6,394	$1,099	$701	Active	16.2
SSFL	IO200316	HYDROGEN LOADING PAD-DELTA	$24,284	$4,327	$243	Active	25
SSFL	IO200340	HYDROGEN LOADING PAD-DELTA	$25,367	$4,520	$2,537	Active	25
SSFL	IO200458	ELECTRICAL CONTROL STATION-BLDG 235	$17,882	$3,000	$5,173	Active	16.1
SSFL	IO200459	ELEC STATION-BLDG 236	$17,882	$3,000	$9,536	Active	16.1
SSFL	IO200460	ELECTRICAL STATION-BLDG 237	$17,882	$3,000	$1,168	Active	16.1
SSFL	IO200466	PYPHORIC STORAGE SHELTER	$27,263	$4,245	$611	Active	9
SSFL	IO200467	ROOF FOR FUEL STATION-NO.925	$9,473	$1,475	$111	Active	25
SSFL	IO200482	ROAD	$22,288	$3,000	$2,229	Active	21
SSFL	IO200483	WATER LINE FOR STORAGE TANK	$29,718	$4,000	$0	Active	19
SSFL	IO200485	FIRE PROTECTION LINE	$37,147	$5,000	$50,334	Active	19
SSFL	IO504008	AIR COND. COCA, IMPROVEMENT	$1,390	$1,282	$14	Active	17
SSFL	IO504008	AIR COND. COCA, IMPROVEMENT	$1,365	$1,282	$0	Active	17
SSFL	IO504010	COCA AREA IMPROVEMENT	$368	$339	$5	Active	13
SSFL	IO504010	COCA AREA IMPROVEMENT	$361	$339	$0	Active	13
SSFL	IO504734	HELIUM SYSTEM	$1,309	$1,230	$13	Active	9
SSFL	IO504734	HELIUM SYSTEM	$1,334	$1,230	$13	Active	9
SSC	2106	MAINTENANCE STORAGE BUILDING	$26,393	$4,891	$264	Active	9
SSC	TRL-117	TRAILER 117	$19,832	$4,295	$2,542	Active	7
SSC	TRL-235	TRAILER 235	$8,667	$4,322	$1,111	Active	7
SSC	TRL-236	TRAILER 236	$9,065	$4,520	$1,162	Active	7
SSC	TRL-266	E Complex Operations Trailer 266	$721	$0	$92	Active	7
SSC	TRL-266	E Complex Operations Trailer 266	$708	$0	$60	Active	7
SSC	TRL-267	E Complex Operations Trailer 267	$618	$0	$79	Active	7
SSC	TRL-267	E Complex Operations Trailer 267	$607	$0	$63	Active	7
SSC	TRL-268	E Complex Operations Trailer 268	$682	$0	$58	Active	7
SSC	TRL-268	E Complex Operations Trailer 268	$695	$0	$89	Active	7

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APPENDIX E. LIST OF CRVS GENERATED FOR THE FY03 ASSESSMENT

Total CRV added to 2003 DM Database by both methods ($M)											$928
Count of Facilities w/out CRV Calc by either Method											575
Facilities without CRV where CRV calculated by Average of DM_Cat Method											
Ent	Ctr	Site	Inst	Facility	Description	Status	DM_ Cat	Capacity	UOM	Built	CRV for Update
R	ARC	ARC	-	N127D	SALVAGE/STORAGE BUILDING		9				$314,091
R	ARC	ARC	-	N229C	VALVE TESTING BUILDING	Active	25				$615,079
R	ARC	ARC	-	N229F	CHEMICAL STORAGE BUILDING		8				$879,051
R	ARC	ARC	-	N238A	ARCJET STORAGE FACILITY		9				$314,091
R	ARC	ARC	-	N250A	COMPRESSED AIR TANK FARM	Active	25				$615,079
R	ARC	ARC	-	T127D	SALVAGE/STORAGE BUILDING		0				$1,332,293
R	ARC	MFA	-	662	CANG Aircraft Hangar		23			2003	$1,980,758
R	DFRC	DFRC	-	0047	IFMP Office Trailer	Active	7				$72,347
R	DFRC	DFRC	-	0048	Office Trailer	Active	7				$72,347
R	DFRC	DFRC	-	0049	Office Trailer	Active	7				$72,347
R	DFRC	DFRC	-	0051	BUCKHORN (PRF)	Active	2				$9,129,767
R	DFRC	DFRC	-	0053	BUCKHORN (PRF) LAB	Active	2				$9,129,767
R	DFRC	DFRC	-	0054	BUCKHORN (PRF)LAB	Active	1				$11,738,189
R	DFRC	DFRC	-	0055	BUCKHORN (PRF) OFFICES	Active	1				$11,738,189
R	DFRC	DFRC	-	0072	TRAILER M.S.B.L.S. (RUNWAY 22)	Active	7				$72,347
R	DFRC	DFRC	-	0079	SHUTTLE SUPPORT TRAINING	Active	7				$72,347
R	DFRC	DFRC	-	0080	SHUTTLE SUPPORT TEST EQUIPMENT POOL	Active	7				$72,347
R	DFRC	DFRC	-	4834 New	Guard Shack		25				$615,079
R	DFRC	DFRC	-	4836	GUARD POST No. 4 (FLIGHTLINE)	Active	0				$1,332,293
R	DFRC	DFRC	-	4843	CREDIT UNION (MODULAR)	Active	0				$1,332,293
R	DFRC	DFRC	-	LRO 192	Long Range Optical		2				$9,129,767
R	DFRC	DFRC	-	NB115	Substation #24		16.2				$1,307,607
R	DFRC	DFRC	-	NB94	Substation No. 6	Active	16.2				$1,307,607
R	DFRC	DFRC	-	NB95	Substation #12		16.2				$1,307,607
R	GRC	GRC	-	0018-1	Fire Pump Building		0				$1,332,293
R	GRC	GRC	-	0018-2	Gas Compressor Building		0				$1,332,293
R	GRC	GRC	-	0038A			0				$1,332,293
R	GRC	GRC	-	0103	Sewage Concrete Tanks		0				$1,332,293
R	GRC	GRC	-	0333A	Acoustic Lab, EMI (Electromagnetic Interference) Lab ,Thermal Cycling Chambers Lab and Storage Area		0				$1,332,293
R	GRC	PBS	-	1921	Wind Turbine Shop		24				$3,594,653
R	GRC	PBS	-	2131	"A" Site Boiler House		24				$3,594,653
R	GRC	PBS	-	2813	K Site Vacuum Equipment Building		24				$3,594,653
R	GRC	PBS	-	9837	Helium Farm at Reactor		10.1				$26,660
R	GRC	PBS	-	9858	Liquid Nitrogen Dewal at Space Power Facility		10.1				$26,660
R	GRC	PBS	-	New01	Fuel Storage Tank		10				$805,719
R	GRC	PBS	-	New02	EPA Test Building		5				$5,188,194
Y	GSFC	GSFC	-	025d	New Fac with Tower		2				$9,129,767
Y	GSFC	GSFC	-	030A	PUMP HOUSE		0				$1,332,293
Y	GSFC	GSFC	-	New04	Shed, storage shed by 79 (on map as 081)		9	0	SF		$314,091
Y	GSFC	GSFC	-	New06	Shed, near metal substation (on map as		25	0	SF		$615,079

					220)						
Y	GSFC	GSFC	-	New13	Diesel fuel farm (on map as 031B)		10.2				$497,297
Y	GSFC	GSFC	-	New14	Collimination tower (on map as 025N)		13	1	EA		$2,111,935
Y	GSFC	GSFC	-	New16	Bunker (on map as 025H) - by 25F		11	0	SF		$312,084
Y	GSFC	GSFC	-	New17	Antenna, NCC network control center (on map as 013A)		12	1	EA		$1,337,935
Y	GSFC	GSFC	-	New18	Shed, metal storage (on map as 403)		25	0	SF		$615,079
Y	GSFC	STDN	HI	033	30 FT ANTENNA BLDG		12				$1,337,935
Y	GSFC	STDN	HI	053	BORESIGHT ANTENNA		13.2				$433,005
Y	GSFC	STDN	HI	061	COLLIMATION TOWER		13				$2,111,935
Y	GSFC	STDN	HI	071	30 FT USB ANTENNA		13.2				$433,005
Y	GSFC	STDN	HI	072	BORESIGHT TYPE II ANTENNA		13.2				$433,005
Y	GSFC	STDN	HI	073	REDUNDANT VERLORT TOWER		24				$3,594,653
Y	GSFC	STDN	HI	078	SCAMP ANTENNA		13.2				$433,005
Y	GSFC	STDN	HI	X36	COLLIMATION TOWER		13				$2,111,935
Y	GSFC	STDN	HI	X62	COMMUNICATIONS BLDG		12				$1,337,935
Y	GSFC	STDN	HI	X63	MICROWAVE TOWER		13				$2,111,935
Y	GSFC	STDN	HI	X64	GUARD SHACK		24				$3,594,653
Y	GSFC	STDN	HI	X75	20 METER ANTENNA & PLATFORM		13.2				$433,005
Y	GSFC	STDN	HI	X76	UNIVERSITY OF HAWAII 7.2 METER P-SAT ANTENNA		13.2				$433,005
Y	GSFC	STDN	HI	X77	SATAN ANTENNA (VHF TRACKING) & PLATFORM		13.2				$433,005
Y	GSFC	WFF	PFR	C Band Ant.	Antenna		13.1				$17,920,078
Y	GSFC	WFF	PFR	C Band Antenna	Antenna		13.1				$17,920,078
Y	GSFC	WFF	PFR	C Band transpor	Transponder		13.1				$17,920,078
Y	GSFC	WFF	PFR	New 101	Image Riometer Antenna Field		13.2				$433,005
Y	GSFC	WFF	PFR	New 102	Image Riometer Building		12				$1,337,935
Y	GSFC	WFF	PFR	New 103	MST Gate		25				$615,079
Y	GSFC	WFF	PFR	New 104	Pad #4 Back Gate		25				$615,079
Y	GSFC	WFF	PFR	New 105	Front Gate Monument		25				$615,079
Y	GSFC	WFF	PFR	New 106	Front Gate		25				$615,079
Y	GSFC	WFF	PFR	New 107	Medium Frequency Radar (MF)		13.2				$433,005
Y	GSFC	WFF	PFR	New 108	Medium Frequency Antenna Field		13.2				$433,005
Y	GSFC	WFF	PFR	New 109	Office Building		5				$5,188,194
Y	GSFC	WFF	PFR	New 110	Fuel Farm		10.2				$497,297
Y	GSFC	WFF	PFR	New 111	Warm Storage Building (WSB)		8				$879,051
Y	GSFC	WFF	PFR	New 112	Roads		21				$6,763,999
Y	GSFC	WFF	PFR	New 113	Communication Building		12				$1,337,935
Y	GSFC	WFF	PFR	New 114	Block House		11				$312,084
Y	GSFC	WFF	PFR	New 115	Pad #3 Gate		25				$615,079
Y	GSFC	WFF	PFR	New 116	Pad #1 Gate		25				$615,079
Y	GSFC	WFF	PFR	New 117	Pad #1 Mini Block House		11				$312,084
Y	GSFC	WFF	PFR	New 118	Pad #1 Launcher		21				$6,763,999
Y	GSFC	WFF	PFR	New 119	Pad #2 Mini Block House		2				$9,129,767
Y	GSFC	WFF	PFR	New 120	Pad #2 Launcher		21				$6,763,999
Y	GSFC	WFF	PFR	New 121	Pad #3 Mini Block House		11				$312,084
Y	GSFC	WFF	PFR	New 122	Pad #3 Launcher		21				$6,763,999
Y	GSFC	WFF	PFR	New 123	Pad #4 Mini Block House		25				$615,079
Y	GSFC	WFF	PFR	New 124	Pad #4 Launcher		25				$615,079
Y	GSFC	WFF	PFR	New 125	Pad #5 Shelter		25				$615,079
Y	GSFC	WFF	PFR	New 126	Pad #5 Launcher		25				$615,079
Y	GSFC	WFF	PFR	New 127	Pad #5 Gate		25				$615,079
Y	GSFC	WFF	PFR	New 128	Wind Tower		24				$3,594,653
Y	GSFC	WFF	PFR	New 129	Tool Crib		25				$615,079
Y	GSFC	WFF	PFR	New 130	Machine Shop		23				$1,980,758
Y	GSFC	WFF	PFR	New 131	Maintenance Garage		23				$1,980,758
Y	GSFC	WFF	PFR	New 132	Universal Launch Protection Shelter (ULPS)		11				$312,084
Y	GSFC	WFF	PFR	New 133	B Rocket Assembly		2				$9,129,767

Y	GSFC	WFF	PFR	New 134	Power Transformer Station		16.2				$1,307,607
Y	GSFC	WFF	PFR	New 135	Lidar Lab		2				$9,129,767
Y	GSFC	WFF	PFR	New 136	Remote Operations Center		14				$24,213,942
Y	GSFC	WFF	PFR	New 137	Telemetry Dome		2				$9,129,767
Y	GSFC	WFF	PFR	New 138	11 Meter Antenna		13.2				$433,005
Y	GSFC	WFF	PFR	New 139	8 Meter TOTS Antenna		13.2				$433,005
Y	GSFC	WFF	PFR	New 140	Red Stone Antenna		13.2				$433,005
Y	GSFC	WFF	PFR	New 141	Red Stone Antenna Building (SAB)		12				$1,337,935
Y	GSFC	WFF	PFR	New 142	Heath Hut Communication Hub		25				$615,079
Y	GSFC	WFF	PFR	New 143	Surveillance Radar Building		12				$1,337,935
Y	GSFC	WFF	PFR	New 144	Climate Trailer and Bore Sight Trailer		7				$72,347
Y	GSFC	WFF	PFR	New 145	Science Operations Center (SOC)		1				$11,738,189
Y	GSFC	WFF	PFR	PF121	Balloon Inflation Facility		2				$9,129,767
Y	GSFC	WFF	PFR	TORS Van #1	Shipping Container		7				$72,347
Y	GSFC	WFF	PFR	TORS Van #2	Shipping Container		25				$615,079
Y	GSFC	WFF	PFR	TOTS 5m Ant.	Shipping Container		25				$615,079
Y	GSFC	WFF	PFR	TOTS 5m Com. Tr	Trailer		7				$72,347
Y	GSFC	WFF	WFF	D-010B	COOLING STATION		17.1				$4,649,491
Y	GSFC	WFF	WFF	F-	INSTRON STRUCTURE		25				$615,079
Y	GSFC	WFF	WFF	U-	BULK STORAGE FACILITY		9				$314,091
Y	GSFC	WFF	WFF	U-012	ELECTRICAL SUBSTATION		16.2				$1,307,607
Y	GSFC	WFF	WFF	U-012A	EMERGENCY GENERATOR	Active	16.1				$1,686,017
Y	GSFC	WFF	WFF	V-__4	ANTENNA TOWER		13.2				$433,005
Y	GSFC	WFF	WFF	V-__5	ANTENNA TOWER, WOODEN		13.2				$433,005
Y	GSFC	WFF	WFF	V-012	BORESIGHT TOWER		13				$2,111,935
Y	GSFC	WFF	WFF	V-013	BORESIGHT TOWER		13				$2,111,935
Y	GSFC	WFF	WFF	V-014	BORESIGHT TOWER		13				$2,111,935
Y	GSFC	WFF	WFF	V-050C	A/G FUEL OIL STORAGE TANK		10				$805,719
Y	GSFC	WFF	WFF	V-091	BLOCK HOUSE		25				$615,079
Y	GSFC	WFF	WFF	W-035B	Strorage Blockhose Appx 35sf		13				$2,111,935
Y	GSFC	WFF	WFF	X-141	Main Xformer/SwitchGear Bldg - Built 1999 Approx 2500 sf		16.1				$1,686,017
Y	GSFC	WFF	WFF	Z-	BLOCK HOUSE		25				$615,079
S	JPL	DSN	CAN	038	Paint, Spray, Garden storage	Active	8				$879,051
S	JPL	DSN	CAN	051	Distilled Water Prccessing		19.1				$862,690
S	JPL	DSN	CAN	052	Heavy Vehicle Maintenance		23				$1,980,758
S	JPL	DSN	CAN	053	Fire valve rm for DSS 34		24				$3,594,653
S	JPL	DSN	CAN	054	BWG MG Shelter DSS 34		24				$3,594,653
S	JPL	DSN	CAN	MS 10 Generator	Generator		16.1				$1,686,017
S	JPL	DSN	CAN	MS 12 Electrica	Electrical		16				$5,590,803
S	JPL	DSN	CAN	MS 12 Oil spill	Oil Spill		24				$3,594,653
S	JPL	DSN	CAN	MS 12 Roads	Roads		21				$6,763,999
S	JPL	DSN	CAN	MS 12 Sewer	Sewer		18				$1,204,730
S	JPL	DSN	CAN	MS 12 Water sto	Water Storage		10.1				$26,660
S	JPL	DSN	CAN	MS 12 Water sys	Water System		18				$1,204,730
S	JPL	DSN	CAN	MS-15	Fuel Storage Tanks		10				$805,719
S	JPL	DSN	CAN	ST 13	Electrical Transformer		16.2				$1,307,607
S	JPL	DSN	GLDSTN	Airplane Runway	Airplane Runway		21				$6,763,999
S	JPL	DSN	GLDSTN	Anemom. Poles	Anemom. Poles		16				$5,590,803
S	JPL	DSN	GLDSTN	Apollo ParkLot	Apollo ParkLot		21				$6,763,999
S	JPL	DSN	GLDSTN	Camera posts	Camera posts		24				$3,594,653
S	JPL	DSN	GLDSTN	DSS-16	Antenna		13.2				$433,005
S	JPL	DSN	GLDSTN	Echo ParkingLot	Parking Lot		21				$6,763,999
S	JPL	DSN	GLDSTN	Electrical Syst	Electrical System		16				$5,590,803
S	JPL	DSN	GLDSTN	Fiber Optic Sys	Fiber Optic System		25				$615,079
S	JPL	DSN	GLDSTN	Fire ProtectSys	Fire Protection System		19				$762,617
S	JPL	DSN	GLDSTN	Fueling Sta GSA	GSA Fueling Station		10.2				$497,297
S	JPL	DSN	GLDSTN	Fueling Station	Fuel Station		10.2				$497,297
S	JPL	DSN	GLDSTN	G-100	Utility Building	Standby	25				$615,079

S	JPL	DSN	GLDSTN	G-201	Operations Building, USB	Active	5				$5,188,194
S	JPL	DSN	GLDSTN	G-202(A-2)	Excess Storage Building	Active	8				$879,051
S	JPL	DSN	GLDSTN	G-203(A-3)	26 Meter Antenna Building	Active	13				$2,111,935
S	JPL	DSN	GLDSTN	G-204(A-4)	26 Meter Ant. Collimation Tower	Active	13				$2,111,935
S	JPL	DSN	GLDSTN	G-205(A-5)	Hydraulic Repair Building	Active	25				$615,079
S	JPL	DSN	GLDSTN	G-206	Telephone Equipment Building (GTE)	Active	25				$615,079
S	JPL	DSN	GLDSTN	G-207	9 Meter Antenna		13.2				$433,005
S	JPL	DSN	GLDSTN	G-208(A-8)	9 Meter Ant. Collimation Tower	Active	13				$2,111,935
S	JPL	DSN	GLDSTN	G-209	Hazardous Material Drum Storage	Active	9				$314,091
S	JPL	DSN	GLDSTN	G-212	Fire Pump House	Active	25				$615,079
S	JPL	DSN	GLDSTN	G-214(A14)	Utility Building	Active	25				$615,079
S	JPL	DSN	GLDSTN	G-234	M.G. Enclosure	Active	25				$615,079
S	JPL	DSN	GLDSTN	G-235	Frequency and Timing Room		25				$615,079
S	JPL	DSN	GLDSTN	G-236	M.G. Shelter		25				$615,079
S	JPL	DSN	GLDSTN	G-238	M.G. Shelter		25				$615,079
S	JPL	DSN	GLDSTN	G-245	Rest Room	Active	25				$615,079
S	JPL	DSN	GLDSTN	G-246	Rest Room	Active	25				$615,079
S	JPL	DSN	GLDSTN	G-301(M-1)	MiniTrack Building (MBS)	Mothballed	25				$615,079
S	JPL	DSN	GLDSTN	G-302(M-2)	Logistics (MBS)	Mothballed	25				$615,079
S	JPL	DSN	GLDSTN	G-305(M-5)	Collimation Tower (MBS)	Mothballed	13				$2,111,935
S	JPL	DSN	GLDSTN	G-306(M-6)	Telemetry (MBS)	Mothballed	13				$2,111,935
S	JPL	DSN	GLDSTN	G-46A	Antenna Shop (MTC)	Active	13				$2,111,935
S	JPL	DSN	GLDSTN	G-46B	Shop/JPL (MTC Yard)	Active	23.1				$13,789,229
S	JPL	DSN	GLDSTN	G-89	Reverse Osmosis Building		19.1				$862,690
S	JPL	DSN	GLDSTN	HydraulicOilPit	Hydraulic Oil Pit		10.1				$26,660
S	JPL	DSN	GLDSTN	M-12	ATS L-Band Building (MBS)	Mothballed	5				$5,188,194
S	JPL	DSN	GLDSTN	M-13	TGS L-Band Building (VLBI) (MBS)	Mothballed	5				$5,188,194
S	JPL	DSN	GLDSTN	Mars ParkingLot	Parking Lot		21				$6,763,999
S	JPL	DSN	GLDSTN	MS-8	ATS Operations Building (VLBI)(MBS)	Mothballed	5				$5,188,194
S	JPL	DSN	GLDSTN	MS-9	Power House		16.1				$1,686,017
S	JPL	DSN	GLDSTN	Oxidation Ponds	Oxidation Pond		25				$615,079
S	JPL	DSN	GLDSTN	Perimeter Fence	Perimeter Fence		25				$615,079
S	JPL	DSN	GLDSTN	Roadways	Roadways		21				$6,763,999
S	JPL	DSN	GLDSTN	Sewage System	Sewage System		18				$1,204,730
S	JPL	DSN	GLDSTN	Site Signage	Signage		25				$615,079
S	JPL	DSN	GLDSTN	Venus ParkLot	Parking Lot		21				$6,763,999
S	JPL	DSN	GLDSTN	Water System	Water System		19				$762,617
S	JPL	DSN	GLDSTN	Water Tank 1	Water Tank		10.1				$26,660
S	JPL	DSN	GLDSTN	Water Tank 2	Water Tank		10.1				$26,660
S	JPL	DSN	GLDSTN	Water Tank 3	Water Tank		10.1				$26,660
S	JPL	DSN	GLDSTN	Water Tank 4	Water Tank		10.1				$26,660
S	JPL	DSN	GLDSTN	Water Tank 5	Water Tank		10.1				$26,660
S	JPL	DSN	GLDSTN	Water Tank 6	Water Tank		10.1				$26,660
S	JPL	DSN	GLDSTN	Water Tank 7	Echo Water Tank IP-3421		18				$1,204,730
S	JPL	DSN	MAD	1400	Pump house bldg 1400		19	1	SF		$762,617
S	JPL	DSN	MAD	1800	Antenna Support Building		17	0	SF	1982	$6,304,651
S	JPL	DSN	MAD	3100	DSS-53 11 meter antenna		13.2	0	EA	1991	$433,005
S	JPL	JPL	-	234-A	LUMBER STORAGE ANNEX	Active	9				$314,091
S	JPL	JPL	-	320	40X40 Storage Bldg	Active	8				$879,051
S	JPL	JPL	-	35	Repeater (Radio)	Active	2				$9,129,767
S	JPL	JPL	-	COMPAIRSYS	Compressor Air System		0				$1,332,293
S	JPL	TBLMTN	-	TM-24A	Daytime telescope		25				$615,079
S	JPL	TBLMTN	-	TM-29	OPTICAL COMMUNICATION TELESCOPE	Active	25				$615,079
S	JPL	TBLMTN	-	TM-Fence	Fence		25				$615,079
S	JPL	TBLMTN	-	TM-LN	Liquid Nitrogen Station		10				$805,719
S	JPL	TBLMTN	-	TM-Roads	Roads & Parking Lots		21				$6,763,999
M	JSC	ELLFLD	-	LB129	LEASE BUILDING 129 EF	Active	9	0	SF	2002	$314,091

M	JSC	JSC	-	031N	LUNAR ROCK SAMPLE STORAGE AND ANALYSIS LAB		0				$1,332,293
M	JSC	JSC	-	032A	BLDG CONVERTED TO STORAGE		0				$1,332,293
M	JSC	JSC	-	950	REMOTE LUNAR SAMPLE STORAGE FACILITY (BROOKS)	Active	9			1997	$314,091
M	JSC	JSC	-	LNDCO	LEASE NASSAU DEVELOPMENT COMPANY	Active	24	0	SF	2003	$3,594,653
M	JSC	WSTF	SH	MSBLS	SHUTTLE LANDING GUIDANCE SYSTEM		15				$1,123,540
M	JSC	WSTF	SH	SH-1	COMMUNICATIONS BUILDING		12				$1,337,935
M	JSC	WSTF	SH	WSSH	RUNWAY		21				$6,763,999
M	JSC	WSTF	TDRSS1	024	Electrical Part Storage		9				$314,091
M	JSC	WSTF	TDRSS1	AWT ANT001	18.3 METER K-BAND SATELLITE DISH ANNTENNA		13.2				$433,005
M	JSC	WSTF	TDRSS1	AWT ANT002	18.3 METER K-BAND SATELLITE DISH ANNTENNA		13.2				$433,005
M	JSC	WSTF	TDRSS1	AWT ANT003	18.3 METER K-BAND SATELLITE DISH ANNTENNA		13.2				$433,005
M	JSC	WSTF	TDRSS1	AWT ANT004	10 METER S-BAND SATELLITE DISH ANNTENNA		13.2				$433,005
M	JSC	WSTF	TDRSS1	SGTGT	TUNNEL SYSTEM		25				$615,079
M	JSC	WSTF	TDRSS1	T Add 4	PARKING LOT		21				$6,763,999
M	JSC	WSTF	TDRSS1	T-15	SATELLITE TRANSMITTING SYSTEM		13				$2,111,935
M	JSC	WSTF	TDRSS1	T-20A	EQUIPMENT STORAGE		8				$879,051
M	JSC	WSTF	TDRSS1	T-5	STORAGE TRAILER		7				$72,347
M	JSC	WSTF	TDRSS2	19MSOU	19 METER K-BAND SATELLITE DISH ANNTENNA		13.2				$433,005
M	JSC	WSTF	TDRSS2	SGT 10M	10 METER S-BAND SATELLITE DISH ANNTENNA		13.2				$433,005
M	JSC	WSTF	TDRSS2	SGT 19MCEN	19 METER K-BAND SATELLITE DISH ANNTENNA		13.2				$433,005
M	JSC	WSTF	TDRSS2	SGT 19MNOR	19 METER K-BAND SATELLITE DISH ANNTENNA		13.2				$433,005
M	JSC	WSTF	WSTF	101A	ELECTRICAL SUBSTATION		16.2				$1,307,607
M	JSC	WSTF	WSTF	162	STORAGE SHED		8				$879,051
M	JSC	WSTF	WSTF	200 East	ELECTRICAL SUBSTATION		16.2				$1,307,607
M	JSC	WSTF	WSTF	200S	BUILDING 200 SUBSTATION		16.2				$1,307,607
M	JSC	WSTF	WSTF	201/203	ELECTRICAL SUBSTATION		16.2				$1,307,607
M	JSC	WSTF	WSTF	250 Area 1	ELECTRICAL SUBSTATION		16.2				$1,307,607
M	JSC	WSTF	WSTF	250 Area 2	STORAGE BUILDING		8				$879,051
M	JSC	WSTF	WSTF	250 Area 3	STORAGE BUILDING		8				$879,051
M	JSC	WSTF	WSTF	250 Area 4	STORAGE BUILDING		8				$879,051
M	JSC	WSTF	WSTF	300 West	ELECTRICAL SUBSTATION		16.2				$1,307,607
M	JSC	WSTF	WSTF	300S	BUILDING 300 SUBSTATION		16.2				$1,307,607
M	JSC	WSTF	WSTF	323	STORAGE BUILDING		8				$879,051
M	JSC	WSTF	WSTF	437A	BATTERY STORAGE BUILDING		9				$314,091
M	JSC	WSTF	WSTF	440S	ELECTRICAL SUBSTATION		16.2				$1,307,607
M	JSC	WSTF	WSTF	500 Area 1	ELECTRICAL SUBSTATION		16.2				$1,307,607
M	JSC	WSTF	WSTF	500 Area 3	OXIDIZER STORAGE PAD		21				$6,763,999
M	JSC	WSTF	WSTF	500 Area 4	ALCOHOL STORAGE AREA		21				$6,763,999

M	JSC	WSTF	WSTF	633A	STORAGE SHED		8				$879,051
M	JSC	WSTF	WSTF	638A	STORAGE SHED		8				$879,051
M	JSC	WSTF	WSTF	639B	STORAGE SHED		8				$879,051
M	JSC	WSTF	WSTF	640C	STORAGE SHED		8				$879,051
M	JSC	WSTF	WSTF	650	WATER TREATMENT BUILDING		19.1				$862,690
M	JSC	WSTF	WSTF	651	Injection Well House		19.1				$862,690
M	JSC	WSTF	WSTF	T-106	SECURITY FIRING RANGE STORAGE BUILDING		8				$879,051
M	JSC	WSTF	WSTF	T-161A	STORAGE BUILDING		8				$879,051
M	JSC	WSTF	WSTF	T-203A	SHOP BUILDING		23				$1,980,758
M	JSC	WSTF	WSTF	T-253	ELECTRICAL STORAGE BUILDING		8				$879,051
M	JSC	WSTF	WSTF	T-270A	TEST BUILDING		2				$9,129,767
M	JSC	WSTF	WSTF	T-272	STORAGE BUILDING		8				$879,051
M	JSC	WSTF	WSTF	T-275A	STORAGE BUILDING		8				$879,051
M	JSC	WSTF	WSTF	T-363	STORAGE BUILDING		8				$879,051
M	JSC	WSTF	WSTF	T-432	PORTABLE BUILDING		28				$253,439
M	JSC	WSTF	WSTF	T634A	JANITORIAL STORAGE BUILDING		8				$879,051
M	JSC	WSTF	WSTF	T-637A	Env. Tool Shed (Portable Building)		28				$253,439
M	KSC	CCAFS	-	01728E	FUEL TANK		10				$805,719
M	KSC	CCAFS	-	1040-1	TANK, RAINWATER SUMP		18.2	1000	GAL		$2,876,850
M	KSC	CCAFS	-	1042-1	TANK, RAINWATER SUMP		18.2	1000	GAL		$2,876,850
M	KSC	CCAFS	-	1044-1	TANK, WASTE RP / JP		10.1	2500	GAL		$26,660
M	KSC	CCAFS	-	1726-A	FUEL TANK		10				$805,719
M	KSC	CCAFS	-	1732-1	DIESEL FUEL TANK		10				$805,719
M	KSC	CCAFS	-	49635-1	TANK, DIESEL		10				$805,719
M	KSC	CCAFS	-	54906A	FUEL TANK		10				$805,719
M	KSC	CCAFS	-	55005A	FUEL TANK, M ANNEX		10				$805,719
M	KSC	CCAFS	-	60631	BLAST WALL		25				$615,079
M	KSC	CCAFS	-	60686	ANTENNA		13.2	0	SF	2002	$433,005
M	KSC	CCAFS	-	66241	DEIONIZED WATER TANK		10.1	20000	GAL	1979	$26,660
M	KSC	CCAFS	-	66257A	FUEL TANK		10				$805,719
M	KSC	CCAFS	-	66267	TANK FARM AREA		10.2	260	SF		$497,297
M	KSC	CCAFS	-	66310-1	TANK, WASTE DETERGENT		10.1				$26,660
M	KSC	CCAFS	-	66310-2	TANK, WASTE ALODINE		18				$1,204,730
M	KSC	CCAFS	-	66311	SUBSTATION		16.2				$1,307,607
M	KSC	CCAFS	-	73004	LIFT STATION		18				$1,204,730
M	KSC	CCAFS	-	77800	HYPERGOL FUEL STORAGE FACILITY		10.1	13039	SF	1985	$26,660
M	KSC	CCAFS	-	77802	GN2 STORAGE TANK		10.1			1985	$26,660
M	KSC	CCAFS	-	80540	HYPERGOLIC OXIDIZER STORAGE FACILITY		10.1			1962	$26,660
M	KSC	CCAFS	-	80700B	INCINERATOR FUEL TANK		10	10000	GAL		$805,719
M	KSC	CCAFS	-	80700C	OXIDIZER TANK		10	22000	GAL		$805,719
M	KSC	CCAFS	-	80700D	CONTAMINATED FUEL TANK		10	27650	GAL		$805,719
M	KSC	KSC	-	66246	Contaminated Water Tank		19			1979	$762,617
M	KSC	KSC	-	66256	Waste Water Tank		19			1994	$762,617
M	KSC	KSC	-	C2-1300	DASR RADAR TOWER		13				$2,111,935
M	KSC	KSC	-	C2-1305	DASR EQUIPMENT BLDG.		1				$11,738,189
M	KSC	KSC	-	C2-1306	GENERATOR BUILDING		16.1		1200 S		$1,686,017
M	KSC	KSC	-	C2-1310	CLOUD TO GROUND LIGHTNING SURVEILLANCE SYSTEM(CGLSS) ALDF		25				$615,079
M	KSC	KSC	-	F4-2449	PUMPHOUSE		19				$762,617
M	KSC	KSC	-	F5-2158	PUMP STATION		19	0			$762,617
M	KSC	KSC	-	G5-1061A	Equipment Building		13			2000	$2,111,935
M	KSC	KSC	-	H5-1113	North PAPI Lights, 7.5K'		15				$1,123,540
M	KSC	KSC	-	H5-1315	North PAPI Lights, 6.5K'		15				$1,123,540
M	KSC	KSC	-	H5-2144	Gate House 4B		25	0			$615,079
M	KSC	KSC	-	H5-2324	MSBLS Monitor, North R/W 33		12				$1,337,935
M	KSC	KSC	-	J5-0132	Meteorological Site #5		12				$1,337,935
M	KSC	KSC	-	J5-0341	Ascent Wind Profiler		0				$1,332,293

M	KSC	KSC	-	J5-0533	MSBLS Monitor, North R/W 15		12				$1,337,935
M	KSC	KSC	-	J5-1094	Remote Satellite Measurement Unit "A"		25	0			$615,079
M	KSC	KSC	-	J5-1095	Remote Satellite Measurement Unit "B"		13.2	0			$433,005
M	KSC	KSC	-	J5-1144	Meteorological Site #3		25	0			$615,079
M	KSC	KSC	-	J5-1145	Remote Satellite Measurement Unit "C"		25	0			$615,079
M	KSC	KSC	-	J5-1195	DIFFERENTIAL GLOBAL POSITIONING BLDG		0			2001	$1,332,293
M	KSC	KSC	-	J5-1196	SLF BASE BUILDING		5				$5,188,194
M	KSC	KSC	-	J5-1197	SLF CONTROL TOWER		13				$2,111,935
M	KSC	KSC	-	J5-2050	MSBLS Monitor, South R/W 33		12				$1,337,935
M	KSC	KSC	-	J6-1874	SUPPORT BUILDING		5				$5,188,194
M	KSC	KSC	-	J6-2076	Launch Viewing Area		25	0			$615,079
M	KSC	KSC	-	J6-2077	Trailer near Banana River Viewing Site		7	0			$72,347
M	KSC	KSC	-	J6-2409	Meteorological Site #4		12				$1,337,935
M	KSC	KSC	-	J7-0132A	LOX OFFICE BUILDING PAD B		0			2002	$1,332,293
M	KSC	KSC	-	J7-0337J	Hazardous Waste Staging Area/Portable		9			1990	$314,091
M	KSC	KSC	-	J7-0689	PAD B OPERATIONS SUPPORT BLDG		0			2003	$1,332,293
M	KSC	KSC	-	J7-1287	Guard House		24				$3,594,653
M	KSC	KSC	-	J7-1388B	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	J7-1388C	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	J8-0956	Guard House		0				$1,332,293
M	KSC	KSC	-	J8-1503B	LOX ENGINEERING OFFICE BUILDING PAD A	Active	5			2002	$5,188,194
M	KSC	KSC	-	J8-1614A	LH2 ENGINEERING OFFICE BUILDING PAD A	Active	5			2002	$5,188,194
M	KSC	KSC	-	J8-1708J	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	J8-1708K	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	J8-2109	PAD A OPERATIONS SUPPORT BUILDING		1				$11,738,189
M	KSC	KSC	-	J8-2126	Guard House		24				$3,594,653
M	KSC	KSC	-	J8-2227	No longer a NASA property		0				$1,332,293
M	KSC	KSC	-	J8-2228	No longer a NASA property		0				$1,332,293
M	KSC	KSC	-	K6-0015	CONVOY STAGING FACILITY		21	0			$6,763,999
M	KSC	KSC	-	K6-0258	MSBLS Monitor, South		12				$1,337,935
M	KSC	KSC	-	K6-0696B	TURNSTILE SHELTER		0				$1,332,293
M	KSC	KSC	-	K6-0696C	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	K6-0696D	ENVIRONMENTAL CONTROL BUILDING		0				$1,332,293
M	KSC	KSC	-	K6-0696E	TURNSTILE SHELTER		0				$1,332,293
M	KSC	KSC	-	K6-0743A	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	K6-0743B	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	K6-0743C	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	K6-0791	OPF SCAPE BUILDING	Active	5				$5,188,194
M	KSC	KSC	-	K6-0792A	Chlorine Storage Building		9				$314,091
M	KSC	KSC	-	K6-0794B	Sand Filter Treatment Tank		9			1988	$314,091
M	KSC	KSC	-	K6-0894F	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	K6-0894G	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	K6-0948	Gate House		24				$3,594,653
M	KSC	KSC	-	K6-1170	S. PAPI LIGHTS 6500 FT		0				$1,332,293
M	KSC	KSC	-	K6-1323	S. PAPI LIGHTS 7500 FT		0				$1,332,293
M	KSC	KSC	-	K6-1347A	Hazardous Waste Staging		9				$314,091

					Area/Portable						
M	KSC	KSC	-	K6-1446E	Drum Storage Building		9			1986	$314,091
M	KSC	KSC	-	K6-1697	GAS/DM WATER PROCESSING PLANT		0				$1,332,293
M	KSC	KSC	-	K6-1697A	Support Building		19.1				$862,690
M	KSC	KSC	-	K6-1747	HYPERGOL DECONTAMINATION BLDG		0				$1,332,293
M	KSC	KSC	-	K6-1748	DRY CHEMICAL STORAGE FACILITY		0				$1,332,293
M	KSC	KSC	-	K6-1847F	Generator Maintenance Shop		9				$314,091
M	KSC	KSC	-	K6-1996I	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	K6-1997	Astronaut Van Garage		9				$314,091
M	KSC	KSC	-	K6-2026	Pump House N14		19				$762,617
M	KSC	KSC	-	K6-2044	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	K6-2095	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	K7-0287	Security Boathouse		24				$3,594,653
M	KSC	KSC	-	K7-0419	PROPELLANT SUPPORT BLDG.		1				$11,738,189
M	KSC	KSC	-	K7-0851	Hazardous Waste Staging Area/Portable		9				$314,091
M	KSC	KSC	-	K7-0951	Gate House		24				$3,594,653
M	KSC	KSC	-	K7-1005A	E GATE HOUSE		25				$615,079
M	KSC	KSC	-	K7-1153A	STORAGE BUILDING		0				$1,332,293
M	KSC	KSC	-	K7-1507	REST ROOMS		25				$615,079
M	KSC	KSC	-	L5-0033	Pump House N13		19				$762,617
M	KSC	KSC	-	L5-1647	Pump House N10		19				$762,617
M	KSC	KSC	-	L6-1636	Gate House 2C		24				$3,594,653
M	KSC	KSC	-	L7-1759	Equipment Shelter		8				$879,051
M	KSC	KSC	-	M5-1543	Antenna #1		13				$2,111,935
M	KSC	KSC	-	M5-1547	Antenna #2		13				$2,111,935
M	KSC	KSC	-	M5-1586	Pump House N8		19				$762,617
M	KSC	KSC	-	M5-1586A	Pump House N9		19				$762,617
M	KSC	KSC	-	M5-1594A	Hazardous Waste Staging Building		9				$314,091
M	KSC	KSC	-	M6-0166	Pump House N11		19				$762,617
M	KSC	KSC	-	M6-0211A	External Tanks and Solid Rocket Mockup		25			2001	$615,079
M	KSC	KSC	-	M6-0223	SHUTTLE/GANTRY MOCK-UP		25				$615,079
M	KSC	KSC	-	M6-0240	Gate 2B		24				$3,594,653
M	KSC	KSC	-	M6-0378	HAZARDOUS WASTE STAGING SHELTER		25				$615,079
M	KSC	KSC	-	M6-0409N	Entrance Ticket Booth		25			2000	$615,079
M	KSC	KSC	-	M6-0427	Pavilion		25				$615,079
M	KSC	KSC	-	M6-0695A	AIR COMPRESSOR STORAGE BUILDING		8				$879,051
M	KSC	KSC	-	M6-0791B	COMMUNICATIONS MAINTENANCE & STORAGE		13				$2,111,935
M	KSC	KSC	-	M6-0880	GSA Seized Property Area		8				$879,051
M	KSC	KSC	-	M6-0894C	POL Shed		9				$314,091
M	KSC	KSC	-	M6-0934	Gate 2A		24			1967	$3,594,653
M	KSC	KSC	-	M6-1063	CITRUS TANK SHELTER		25				$615,079
M	KSC	KSC	-	M6-1724	Security Gate 2D		25				$615,079
M	KSC	KSC	-	M6-1757	Pump House N6		19				$762,617
M	KSC	KSC	-	M7-0355D	ELECTRICAL MOTOR CONTROL BLDG		25	0			$615,079
M	KSC	KSC	-	M7-0360A	Hazardous Waste Staging Area		9				$314,091
M	KSC	KSC	-	M7-0361A	AMMONIA VAPOR CONTAINMENT BLDG		0				$1,332,293
M	KSC	KSC	-	M7-0556A	POL Building		10.2	135	SF		$497,297
M	KSC	KSC	-	M7-0660	PARACHUTE REFURBISHMENT FACILITY		25				$615,079
M	KSC	KSC	-	M7-1011A	HYPERGOL MODULE PROCESSING, NORTH		2				$9,129,767
M	KSC	KSC	-	M7-1059	HMF SUPPORT BUILDING #2		0			2002	$1,332,293

M	KSC	KSC	-	M7-1061B	Line-of-Sight Antenna		13				$2,111,935
M	KSC	KSC	-	M7-1211	Cooling Tower		17.1			1991	$4,649,491
M	KSC	KSC	-	M7-1357A	Line-of-Sight Antenna		13				$2,111,935
M	KSC	KSC	-	M7-1469C	POL Shed		9				$314,091
M	KSC	KSC	-	M7-1469D	Storage Shed		8				$879,051
M	KSC	KSC	-	M7-1469F	Cooling Tower		17.1	1988			$4,649,491
M	KSC	KSC	-	M8-2230	Bridge - NASA Causeway East		21				$6,763,999
M	KSC	KSC	-	N6-0065	Equipment Shelter		8				$879,051
M	KSC	KSC	-	N6-0107	Pump House N5		19				$762,617
M	KSC	KSC	-	N6-0407	Pump House N3		19				$762,617
M	KSC	KSC	-	New01	Trailer		7	0	0	1991	$72,347
M	KSC	KSC	-	New02	Restroom Trailer		25	0	0		$615,079
M	KSC	KSC	-	P6-1333	FIREARMS RANGE PAVILION STORAGE		8				$879,051
M	KSC	KSC	-	P6-1386	PAVILION		25				$615,079
M	KSC	KSC	-	P6-1436	RESTROOMS		25				$615,079
M	KSC	KSC	-	P6-1686	PAVILION BUILDING		25				$615,079
M	KSC	KSC	-	P6-1687	RESTROOMS		25				$615,079
M	KSC	KSC	-	P6-1689	PAVILION BUILDING		24				$3,594,653
M	KSC	KSC	-	P6-1735	RESTROOMS		25				$615,079
M	KSC	KSC	-	P6-1789B	PARK RESIDENT'S TRAILER		7				$72,347
M	KSC	KSC	-	P6-1833	RESTROOMS		25				$615,079
M	KSC	KSC	-	P6-1833A	BALL PARK CONCESSION STAND		25				$615,079
M	KSC	KSC	-	P6-1835	RESTROOMS		25				$615,079
M	KSC	KSC	-	P6-1836	RESTROOMS		25				$615,079
M	KSC	KSC	-	P6-1837	BOAT RAMP SNACK BAR		25				$615,079
M	KSC	KSC	-	P6-1838	GUARD HOUSE		25				$615,079
M	KSC	KSC	-	P6-1886	HANDBALL COURT		25				$615,079
M	KSC	KSC	-	TR1-705	Trailer		7	0			$72,347
M	KSC	KSC	-	TR1-706	Trailer		7	0			$72,347
M	KSC	KSC	-	TR3-034	Trailer		0			1991	$1,332,293
M	KSC	KSC	-	TR6-094	RESTROOM TRAILER		0				$1,332,293
M	KSC	KSC	-	TRM4-100	Trailer		7	0			$72,347
M	KSC	KSC	-	TRM4-101	Trailer		7	0			$72,347
M	KSC	KSC	-	TRM4-102	Trailer		0				$1,332,293
M	KSC	KSC	-	TRM4-103	Trailer		7	0			$72,347
M	KSC	KSC	-	TRM4-104	Trailer		0				$1,332,293
M	KSC	KSC	-	TRM4-105	Trailer		7	0			$72,347
M	KSC	TALS	-	F5-2158	PUMP STATION		19				$762,617
M	KSC	TALS	-	H5-2144	Gate House 4B		24				$3,594,653
M	KSC	TALS	-	J5-1094	Remote Satellite Measurement Unit "A"		12				$1,337,935
M	KSC	TALS	-	J5-1095	Remote Satellite Measurement Unit "B"		12				$1,337,935
M	KSC	TALS	-	J5-1144	Meteorological Site #3		12				$1,337,935
M	KSC	TALS	-	J5-1145	Remote Satellite Measurement Unit "C"		12				$1,337,935
M	KSC	TALS	-	J6-2076	Launch Viewing Area		25				$615,079
M	KSC	TALS	-	J6-2077	Trailer near Banana River Viewing Site		7				$72,347
M	KSC	TALS	-	K6-0015	CONVOY STAGING FACILITY		21				$6,763,999
M	KSC	TALS	-	M7-0355D	ELECTRICAL MOTOR CONTROL BLDG		24				$3,594,653
M	KSC	TALS	-	TR1-705	Trailer		7				$72,347
M	KSC	TALS	-	TR1-706	Trailer		7				$72,347
M	KSC	TALS	-	TRM4-100	Trailer		7				$72,347
M	KSC	TALS	-	TRM4-101	Trailer		7				$72,347
M	KSC	TALS	-	TRM4-103	Trailer		7				$72,347
M	KSC	TALS	-	TRM4-105	Trailer		7				$72,347
R	LaRC	LaRC	-	1130T5	Child daycare trailer		0	0		0	$1,332,293
R	LaRC	LaRC	-	1310	LANGLEY FEDERAL CREDIT UNION (PRIVATE)	Active	28	0	SF	2002	$253,439
R	LaRC	LaRC	-	1321	NASA GUARD HOUSE	Active	24	0	SF	1989	$3,594,653
R	LaRC	LaRC	-	851-11	FENCE MODS	Active	0	21	SY	2003	$1,332,293
M	MSFC	SSFL	-	760	Tire Shop		23				$1,980,758
M	MSFC	SSFL	-	IO200032	Gas Fueling Station		10.2				$497,297

M	MSFC	SSFL	-	IO200174	STAND SHELTER-NO.739	Active	9			1956	$314,091
M	MSFC	SSFL	-	IO200463	SHELTER FOR SHEET METAL BRAKE	Active	9			1972	$314,091
M	MSFC	SSFL	-	New 01	Maintenance and Paint Shop		23				$1,980,758
M	SSC	SSC	-	2208	GW Pump & Treat Facility		18.1				$537,157
M	SSC	SSC	-	2211	GW Pump & Treat Facility		18.1				$537,157
M	SSC	SSC	-	2411B	GW Pump & Treat Facility		19.1				$862,690
M	SSC	SSC	-	3307B	GW Pump & Treat Facility		19.1				$862,690
M	SSC	SSC	-	New01	Skeet Range Building		25				$615,079
M	SSC	SSC	-	New02	Pistol Range Shelter		25				$615,079
M	SSC	SSC	-	New03	Gun Range Tower		24				$3,594,653
M	SSC	SSC	-	New04	Pistol Range Shelter		25				$615,079
M	SSC	SSC	-	New05	Gun Range Picnic Area		25				$615,079
M	SSC	SSC	-	New06	Gun Range Shelter		25				$615,079
M	SSC	SSC	-	New07	Shed by Gun Range		25				$615,079
M	SSC	SSC	-	New08	Shelter near Marina 0045		25				$615,079
M	SSC	SSC	-	New09	5 Sheds by 2407		25				$615,079
M	SSC	SSC	-	New10	Trailer by 2403		7				$72,347
M	SSC	SSC	-	New11	Ballfield 4		25				$615,079
M	SSC	SSC	-	New12	Pavilion by Ballfield 3		25				$615,079
M	SSC	SSC	-	New13	Ballfield 3		25				$615,079
M	SSC	SSC	-	New14	Shed behind 2501		25				$615,079
M	SSC	SSC	-	New15	Butler Building by 7022		28				$253,439
M	SSC	SSC	-	New16	Landfill Cell 4		25				$615,079
M	SSC	SSC	-	New17	Landfill Cell 3		25				$615,079
M	SSC	SSC	-	New18	C&D Landfill		25				$615,079
M	SSC	SSC	-	New19	Hazardous Waste Storage by 8110		10				$805,719
M	SSC	SSC	-	New20	Hazardous Waste Storage 1 by 2206		10.1				$26,660
M	SSC	SSC	-	New21	Hazardous Waste Storage 2 by 2206.		9				$314,091
Sum of CRV added to 2003 DM Database by Avg of DM_Cat Method ($M)											**$906**
Count of Facilities w/out CRV Calc by Avg of DM_Cat Method											**486**

Facilities without CRV where CRV calculated by Capacity & UOM Cost Calculation

Ent	Ctr	Site	Inst	Fac	Desc	Status	DM_Cat	Capacity	UOM	Built	CRVforUpdate
R	ARC	ARC	-	T10-A	OFFICE TRAILER FILE# T-190 PENDING EXCESS		7	1040	SF	1969	$37,440
R	ARC	ARC	-	T10-B	OFFICE TRAILER FILE# T-008 PENDING EXCESS		7	520	SF	1976	$18,720
R	ARC	ARC	-	T10-C	OFFICE TRAILER FILE# T-255 PENDING EXCESS		7	520	SF	1969	$18,720
R	ARC	ARC	-	T16-B	OFFICE TRAILER FILE# T-000 EXCESS PENDING		7	470	SF	1972	$16,920
R	ARC	ARC	-	T19-A/T923	T923-D ADMIN&KITCHEN TRAILER CHILD CARE FILE# T018		7	1440	SF	1980	$51,840
R	ARC	ARC	-	T20-D	CHILD CARE TRAILER FILE# T-350 (EXCESS PENDING)		7	2880	SF	1986	$103,680
R	ARC	ARC	-	T20-E	CHILD CARE STORAGE FILE# T-874 (EXCESS PENDING)		7	535	SF	1964	$19,260
R	ARC	ARC	-	T24-A	OFFICE TRAILER FILE# T-320 PENDING EXCESS		7	400	SF	1967	$14,400
R	ARC	ARC	-	T24-B	OFFICE TRAILER FILE# T-948 PENDING EXCESS		7	400	SF	1962	$14,400
R	ARC	ARC	-	T25-A	SHOP TRAILER FILE# T-431 PENDING EXCESS		7	239	SF	1964	$8,604
R	ARC	ARC	-	T25-B	OFFICE TRAILER FILE# T-705 PENDING EXCESS		7	450	SF	1969	$16,200
R	ARC	ARC	-	T28-D	MODULAR OFFICE TRAILER COMPLEX	Active	7	2880	SF	2001	$103,680

					CODE JT						
R	ARC	ARC	-	T28-E	MODULAR OFFICE TRAILER COMPLEX CODE JT	Active	7	2880	SF	2001	$103,680
R	ARC	ARC	-	T2-B	OFFICE TRAILER FILE# T-272 PENDING EXCESS		7	400	SF	1963	$14,400
R	ARC	ARC	-	T2-D	OFFICER TRAILER (SECURITY) FILE# T-256 EXCESS PEND		7	550	SF	1963	$19,800
R	ARC	ARC	-	T6-A	OFFICE TRAILER FILE# T-609 PENDING EXCESS		7	520	SF	1966	$18,720
R	ARC	ARC	-	T6-G	STORAGE TRAILERS FILE# T-289 PENDING EXCESS		7	400	SF	1963	$14,400
R	ARC	MFA	-	T37-D	SPACE CAMP DORMITORY TRAILER		7	3927	SF	1995	$141,372
R	DFRC	DFRC	-	4863	SHUTTLE SUPPORT ADMIN BUILDING	Active	5	2113	SF	2003	$378,861
R	DFRC	DFRC	-	4866	GROUND CREW BUILDING (TRAILER T-9)	Active	5	275	SF	2003	$49,308
R	DFRC	DFRC	-	4875B	Battery Building	Active	23	427	SF	2003	$70,711
R	DFRC	DFRC	-	4899 B	WOODEN GAZEBO (BY BUILDING 4840)	Active	24	288	SF	2003	$102,816
R	DFRC	DFRC	-	T-02	EMPLOYEE ACTIVITIES (EXCH. COUNCIL)		7	500	SF	1999	$18,000
R	DFRC	DFRC	-	T-03	EXCHANGE COUNCIL STORAGE		7	540	SF	2003	$19,440
R	GRC	GRC	-	0113	10X10 FT.SWT SHOP BLDG.	Active	24	9961	SF	1955	$3,556,077
R	GRC	GRC	-	0319	SUBSTATION N	Active	16.2	5000	KV	1982	$900,000
R	GRC	GRC	-	3926	DEB PARKING AND ACCESS ROADS		21	13	AC	1964	$404,427
R	GRC	PBS	-	1197	REACTOR MONITORNG STA(1111)	In-Active	2	84	EA	1959	$100,523
Y	GSFC	GSFC	-	New01	Shed by 25b (not on map?)		25	144	SF		$29,102
Y	GSFC	GSFC	-	New02	Shed, wooden storage shed (by bldg 81)		9	300	SF		$25,590
Y	GSFC	GSFC	-	New03	Shed, wooden shed by 79 (on map as 80?)		25	800	SF		$161,680
Y	GSFC	GSFC	-	New05	Shed, storage (on map as 027C)		25	2000	SF		$404,200
Y	GSFC	GSFC	-	New08	Shed next to 25b (on map as 025E)		25	250	SF		$50,525
Y	GSFC	GSFC	-	New09	Gift shop (on map as 088B)		25	500	Sf		$101,050
Y	GSFC	GSFC	-	New10	Dome, small salt dome (on map as 027F)		9	600	SF		$51,180
Y	GSFC	GSFC	-	New11	Dome building, composite material with steel frame (on map as 215)		23.1	254	SF		$59,385
Y	GSFC	GSFC	-	New12	Dome bldg. galv metal wall (on map as 217)		25	254	SF		$51,333
Y	GSFC	GSFC	-	New15	Collimination tower (025D ?)		13	150	SF		$110,010
Y	GSFC	WFF	WFF	D-010A	ELECT.TRANSFORMER STATION		16.2	150	KV	1968	$27,000
S	JPL	JPL	-	T1721	Two Story Modular	Active	28	2880	SF	2001	$295,776
S	JPL	JPL	-	T1722	Mars Exploration I	Active	7	7200	SF	2001	$259,200
S	JPL	JPL	-	T1723	Mars Exploration II	Active	7	9360	SF	2001	$336,960
S	JPL	JPL	-	T1724	Mars Modular 1722 Restroom	Active	7	720	SF	2001	$25,920
S	JPL	JPL	-	T1725	Mars Modular 1723 Restroom	Active	7	720	SF	2001	$25,920
M	JSC	WSTF	WSTF	HANGER #1	STA HANGER AT EL PASO INTERNATIONAL AP	Active	23	23006	SF	1966	$3,809,794
M	JSC	WSTF	WSTF	HANGER #2	T-38 HANGER AT EL PASO INTERNATIONAL AP	Active	23	28297	SF	1966	$4,685,983
M	KSC	CCAFS	-	60683	EQUIPMENT PAD		21	584	SF	1968	$59,626
M	KSC	CCAFS	-	66259	EQUIPMENT BUILDING		23	225	SF		$37,260
M	KSC	CCAFS	-	66266	DRUM STORAGE BUILDING		9	338	SF		$28,831

M	KSC	CCAFS	-	77605	TRUCK WEIGH STATION		25	700	SF		$141,470
M	KSC	CCAFS	-	77630	SCALES EQUIPMENT BUILDING		23	25	SF		$4,140
M	KSC	CCAFS	-	77801	MMH TRAILER PARKING		21	1000	SY	1985	$81,400
M	KSC	CCAFS	-	80700A	CONTROL BUILDING		25	323	SF		$65,278
M	KSC	CCAFS	-	80700J	EQUIPMENT SHELTER		9	1280	SF		$299,264
M	KSC	CCAFS	-	80700K	EQUIPMENT SHELTER		9	1280	SF		$109,184
M	KSC	CCAFS	-	80801	OXIDIZER PARKING		21	508	SY	1985	$41,351
M	KSC	KSC	-	H7-1681A	CHEMICAL STORAGE SHED		9	275	SF		$23,458
M	KSC	KSC	-	J6-0490C	Equipment Shelter		2	64	SF	1965	$24,755
M	KSC	KSC	-	J6-2024	Guard House		24	24	SF		$8,568
M	KSC	KSC	-	K6-1200E	VAB MODULAR OFFICE BUILDING		7	24720	SF	1984	$889,920
M	KSC	KSC	-	K7-0042	Guard House		24	48	SF		$17,136
M	KSC	KSC	-	K7-0140A	Guard House		24	24	SF		$8,568
M	KSC	KSC	-	K7-0188C	Toilet Room		24	107	SF	1987	$38,199
M	KSC	KSC	-	K7-0315	Ammonia Cylinger Storage Building		8	400	SF		$41,840
M	KSC	KSC	-	L6-0196	CHILLER BUILDING		17.1	64	SF		$19,053
M	KSC	KSC	-	M6-0456	Battery Storage Shed		8	78	SF	2001	$8,159
M	KSC	KSC	-	M6-0502	Storage Yard		9	10880	SF	2001	$928,064
M	KSC	KSC	-	M6-0505A	Gas Storage		10	24	SF	2001	$6,341
M	KSC	KSC	-	M6-0555	Nursery		25	3120	SF	2001	$630,552
M	KSC	KSC	-	M6-0689C	Air Compressor Storage Building		8	294	SF		$30,752
M	KSC	KSC	-	M7-0459A	Guard House		25	24	SF		$4,850
M	KSC	KSC	-	M7-0556B	Hazardous Waste Staging Building		9	135	SF		$11,516
M	KSC	KSC	-	TR1-430	TRIPLE A CUSTOM		7	672	SF	1981	$24,192
M	KSC	KSC	-	TR1-439	T&R CUSTOM		7	672	SF	1981	$24,192
M	KSC	KSC	-	TR1-469	BENETTE		7	672	SF	1981	$24,192
M	KSC	KSC	-	TR1-585	KING'S CUSTOM		7	672	SF	1983	$24,192
M	KSC	KSC	-	TR1-586	KING'S CUSTOM		7	672	SF	1983	$24,192
M	KSC	KSC	-	TR1-622	COASTAL BUILDING SYSTEMS		7	720	SF	1983	$25,920
M	KSC	KSC	-	TR1-717	TRIPLE A CUSTOM		7	720	SF	1982	$25,920
M	KSC	KSC	-	TRM-038	TEMPORARY BUILDING NO. 57 (2T)		7	1344	SF	1984	$48,384
M	KSC	TALS	-	M7-0459A	Guard House		24	24	SF		$8,568
M	KSC	TALS	-	M7-0556A	POL Building		9	135	SF		$11,516
M	KSC	TALS	-	M7-0556B	Hazardous Waste Staging Building		9	135	SF		$11,516
R	LaRC	LaRC	-	1312	AIR FORCE LIAISON OFFICE (AIR FORCE)	Active	5	2330	SF	1989	$417,769
M	MSFC	MSFC	-	T115	OFFICE TRAILER		7	460	SF	1969	$16,560
M	MSFC	MSFC	-	T259	OFFICE TRAILER		7	1064	SF	1986	$38,304
M	MSFC	MSFC	-	T260	OFFICE TRAILER		7	1064	SF	1986	$38,304
M	MSFC	MSFC	-	T295	OFFICE TRAILER		7	3600	SF	1994	$129,600
M	SSC	SSC	-	2110	SHARED RESOURCE LABORATORY		5	1582	SF	1967	$283,653
Sum of CRV added to 2003 DM Database by Capacity & UOM Calc Method ($M)											**$22**
Count of Facilities w/out CRV Calc by Avg of DM_Cat Method											**89**

APPENDIX F. FACILITIES NO LONGER IN THE RPI NOT FOUND ON SITE AND NOT ASSESSED, BUT A RECORD STILL EXISTED IN THE DM DATABASE

These are facilities that were in the RPI when the project began, but were corrected or deleted from the RPI by the end of the assessement. For the most part, these facilities never had assessment ratings (even in 2002) and thus had probably been demolished prior to the 2002 DM Assessment. In the few cases where assessment ratings for 2002 exist, the facilities were duplicates of other facilities (usually due to one facility number in RPI and another on the actual building/facility).

Site	Inst	Facility	Status	CRV	FAC_ DM	RPI Check	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC	Plumbing	Conveyance	Program Support Equipment
ARC	-	T21-A	Abandoned	$19,467.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
CP	-	CP294	Standby	$85,870.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
DFRC	-	4891	Active	$66,537.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
DFRC	-	NB17	Active	$34,975.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
DFRC	-	NB19	Active	$34,496.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
DFRC	-	Substation 14		$0.00	$0.00	Not in RPI	4	4	4	5	3	5	5	5	5
DFRC	-	Substation 23		$0.00	$0.00	Not in RPI	5	5	5	5	5	5	5	5	5
WFF	-	A-002	Active	$12,578.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
WFF	-	A-042	Active	$16,329.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
WFF	-	D-049A	Active	$32,688.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
WFF	-	E-133	Active	$12,989.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
WFF	-	S-0024	Active	$86,762.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
WFF	-	S-0058	Active	$3,317.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
WFF	-	S-0096	Active	$3,537,823.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
JPL	-	113	Active	$1,807,852.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
JPL	-	115	Active	$52,850.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
JPL	-	281	Active	$470,154.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
JPL	-	292	Active	$131,425.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
JPL	-	304	Active	$28,847.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
JPL	-	72	Active	$832,648.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
JPL	-	78	Active	$1,252,606.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
JPL	-	91	Active	$1,650,176.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
DSN	CAN	012	Active	$22,039.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
DSN	CAN	017	Active	$826.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
DSN	CAN	018	Active	$923.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
DSN	CAN	023	Active	$3,005.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
DSN	CAN	ST9	Active	$15,800.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
DSN	GLDSTN	DSS-17		$0.00	$0.00	Not in RPI	3	3	3	0	3	0	3	0	3
DSN	GLDSTN	G-89		$0.00	$0.00	Not in RPI	3	3	3	2	3	3	3	0	2
WSTF	TDRSS1	T Add 2		$0.00	$0.00	Not in RPI	5	5	5	5	5	5	5	5	5
WSTF	TDRSS2	T Add 5		$0.00	$0.00	Not in RPI	5	5	5	5	4	4	5	5	5
KSC	-	E3-1139	ID Only	$0.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
KSC	-	H5-1633	Active	$8,016.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
KSC	-	TRM-020	Active	$24,074.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
LaRC	-	1249	Abandoned	$0.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
LaRC	-	720A	Abandoned	$791,826.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0
LaRC	-	720B	Abandoned	$10,668,765.00	$0.00	Not in RPI	0	0	0	0	0	0	0	0	0

APPENDIX G. SYSTEM RATING DIFFERENCE (GREATER THAN 5)

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC.	Plumbing.	Convey	Equip
Moffet Federal Airfield										
679	CIVIL ENGINERRING WAREHOUSE	5 0	5 0	5 0	5 0	5 0	5 0	5 0		
CP283	GAS PIPELINE					0 5				
N271	INDUSTRIAL WASTEWATER PRE-TREAT						5 0			
Dryden Flight Research Center										
0020	CREW ROOM	5 0	4 0	4 0	4 0	4 0	4 0	4 0		
1623	AIRCRAFT SUPPORT FACILITY					5 0				
4834	SHUTTLE SHOPS	0 4	0 4	0 4	0 4	0 5		0 5	0 5	
4862	MICROWAVE TOWER/COMMUNICATIONS				4 0		5 0			
4899 A	WOODEN GAZEBO (BY BUILDING 4800)					0 5				
4984	PAYLOAD RECEIVING AREA	0 4	0 4	0 3	0 3	0 3		0 3		
NB104	RUN-UP PAD JET PROPEL.A/C	5 0		5 0						
NB111	FPS-16 TRIPLEX ANTENNA					5 0				
NB5	AIRCRAFT PARKING AND SERVICING AR			5 0						
NB89	SUBSTATION No. 16		0 5		0 5			0 5		
NB97	Substation No. 14		0 4	0 4	0 5			0 5	0 5	0 5
Glenn Research Center										
0025	Sanitary Lift Station						5 0			5 0
0032	SUBSTATION C		5 0		5 0					
0041	SUBSTATION F				5 0					
0054	8X6 FT. RESEARCH & CONTROL BUILDIN			3 5			5 0	3 0	4 0	
0089	10X10 FT.SWT SUBSTATION K		4 0		5 0		5 0			
0131	FLT.RES.UG FUEL STOR.&TRA. REFUEL		0 5			3 0		3 5		
0144	PSL TURBO-EXPANDER NO. 2			0 5	0 5	0 4		4 0		
8132	RYE BEACH PUMPING STATION		3 5	3 5						
8561	SUBSTATION A									
9320	SITE IMPROVEMENT & DEVELOPMENT	0 5								
Goddard Space Flight Center										
005A	B-COMPOSITE MATERIALS LAB BLDG	5 3		0 5					0 5	0 4

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC.	Plumbing.	Convey	Equip
026	B-NASA SPACE SCIENCE DATA CENTER			0 5						
027G	S-SALT DOME #2									
028	B-TECHNICAL PROCESSING FAC BLDG			0 5						0 5
030A	PUMP HOUSE						5 0	5 0		0 5
076	B-ISOMAX BLDG	0 5	0 5	0 5	0 5	0 5		0 5	0 5	0 5
921	S-COMPATIBLE TEST VAN (CTV) FACILIT	0 4	0 4	0 4	0 5	0 4				0 4
922	S-ELECTRICAL DISTR SWITCHYARD AT E		0 5	0 4	5 0					
924	S-MOBILE LASER/VLBI SITE--GORF		4 0	4 0	5 0	5 3	5 0			
948	S-OPTICAL TRACKING FAC/UTILITIES-OT	0 5				0 5		0 5		0 4
969	S-LANDSAT DIRECT READOUT FACILITY		5 0	0 4	4 0		4 0			0 4
991	S-GAS PIPE LINE SYSTEM (1.2 MILES)					0 5				
997	S-WATER STORAGE TANK			0 5		5 2		5 0		
E-002A	40 TON AIR COOLED CONDEN.							0 5		
F-004A	WTR CHILLER UNIT	5 0		5 0						
F-005A	PKG AIRCOOLED WATER CHILLER UNIT							0 5		
F-006B	SUBSTATION	4 0		5 0						
F-007	MULTI-PAYLOAD PROCESSING FACILITY						5 0			
F-008A	SUBSTATION	5 0		5 0		5 0				
F-037	225 KVA TRANSFORMER - PAD MTD					0 5				
F-038	150 KVA TRANSFORMER - PAD MTD					0 5				
F-039	112.5 KVA TRANSFORMER - PAD MTD					0 5				
F-162	RAIN SIMULATION FACILITY						5 0			0 5
F-163	CAL LAB BULK STOR BLDG						5 0			
I-0131	ISLAND OPEN STORAGE AREAS			0 5	0 5					
N-157	PLANT MAINTENANCE SHOP		2 5							
S-0012	STA STEAM GENERATING PLANT - MB		5 0					3 5		
U-012	ELECTRICAL SUBSTATION		5 0		5 0		4 0	4 0		
U-012A	EMERGENCY GENERATOR					0 5		0 5		
U-030B	FUEL OIL SUPPLY TANK STOR					0 5				
U-033	BORESITE EQUIP SHELTER (RADAR COL					5 0				
U-081	Hazardous Waste Staging Facility - ML			0 5	0 5			0 5		
V-042	READY SERVICE MAGAZINE			0 5	0 5	0 5				

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC.	Plumbing.	Convey	Equip
V-052	READY SVC CHML STOR MAG			0 5	0 5	0 5				
W-021	15 KV ELECTRICAL SWITCHING STATION			0 5		0 5				
W-052	ELECT EQUIP SHLTR (PRI STCHSTA)			0 5						0 4
W-065	ASSEMBLY SHOP #3						5 0		0 5	0 4
W-066	OUTDOOR ELECT SUBSTATION			0 5						
X-075C	75 KVA TRANSFORMER - PAD MOUNTED		5 0							
X-076	EMER POWER GENERATOR BLDG (DIES		0 5	0 5	0 5			0 4		
Y-074	15 KV ELECTRICAL SWITCHING STATION			0 5						
Y-088	METEOR INST CNTRL BLDG #1		0 4	0 5	0 5	5 0				
Z-026	45 KVA TRANSFORMER - PAD MOUNTED			0 5		0 4				
Hawaii Spaceflight Tracking/Data Network (STDN)										
004	TECHNOLOGICAL LIBRARY BUILDING					5 0				
005	FLAMMABLE STORAGE BUILDING	5 0	2 0	2 0	3 0	4 0				
073	REDUNDANT VERLORT TOWER	5 3	4 0		5 0	5 3				
444	UTILITIES						5 0			0 3
X75	20 METER ANTENNA & PLATFORM		5 0		5 0				0 5	5 0
Poker Flats Research Range, Fairbanks, AK										
TORS V	Shipping Container	5 0			4 0					
TORS V	Shipping Container	5 0			4 0					
Jet Propulsion Laboratory										
220	ICS TERMINAL							0 5		
227	GUARD SHELTER			5 3						
228	COOLING TOWER (A & B)		0 5		0 5				0 4	
237	COOLING TOWER		0 5		0 5				0 5	
294	GUARD SHELTER (VISITORS LOT)									
316	HAZARDOUS MATERIALS STORAGE FACI						5 0			
320	40X40 Storage Bldg					0 5		0 5	0 5	0 5
COMPAI	Compressor Air System		0 5	0 5	0 5	0 5		2 5	0 5	
JS-103	Sewage & Industrial Waste					0 5		3 5		
JW-102	WATER DISTRIBUTION SYSTEM					0 5		2 5		
TM-24A	Daytime telescope							0 5	0 5	

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC.	Plumbing.	Convey	Equip
TM-Fenc	Fence		0 5	0 5	0 5	0 5		0 5	0 5	0 5
TM-LN	Liquid Nitrogen Station				0 5				0 5	0 5
TM-Road	Roads & Parking Lots		0 5	0 5	0 5	0 5		0 5	0 5	0 5
Canberra Deep Space Communications Complex, Australia										
002	POWER BLDG	50 5								
007	TIMBER STORE BLDG	0 5	0 4	0 4	0 4	0 4				
029	X-Band Transmitter M.G. Bldg.					0 5		0 5		0 5
041	Combined Car Wash, Paint Spray and Garde									0 5
042	GRTS S Band Antenna Bldg.							0 5		0 5
043	GRTS KU Band Antena Bldg.							0 5		0 5
053	Fire valve rm for DSS 34					0 5				0 5
054	BWG MG Shelter DSS 34							0 5		0 5
MS 12 Oi	Oil Spill			5 0						0 4
MS 12 R	Roads					0 5				
MS 12 S	Sewer			5 0						
MS-15	Fuel Storage Tanks		0 5	0 5	0 5			0 5		0 5
MS9	POLLUTION LAGOON					5 0				
ST 20	Additional Fire Water Storage Tank	5 3			0 5	0 5				
ST 25	IMP8 YAGI Antenna					0 5				0 5
ST18	26 M ANTENNA		0 5		0 4			0 4		
ST3	MICROWAVE TOWER					0 5				
Goldstone, Deep Space Communications Complex ,CA										
G-245	Rest Room					5 0			0 5	0 5
G-246	Rest Room		5 3			5 0			0 5	0 5
Water Ta	Water Tank				0 5	5 0		5 0		0 5
Water Ta	Water Tank				0 5	5 0		5 0		0 5
Water Ta	Water Tank				0 5	5 0		5 0		0 5
Water Ta	Water Tank				0 5	5 0		5 0		0 5
Water Ta	Water Tank				0 5	5 0		5 0		0 5
Water Ta	Water Tank				0 5	5 0		5 0		0 5
Madrid Deep Space Communications Complex, Spain										
1600	NASA Communication Center (NASCOM)				0 5					

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC.	Plumbing.	Convey	Equip
White Sands Test Facility										
101A	ELECTRICAL SUBSTATION		0 5	0 5	0 5			0 5	0 5	0 5
135	COMMUNICATIONS SYSTEM 400 AREA					0 5				
162	STORAGE SHED					0 5		0 5	0 5	0 5
200 East	ELECTRICAL SUBSTATION		0 5	0 5	0 5			0 5	0 5	0 5
200S	BUILDING 200 SUBSTATION		0 5	0 5	0 5			0 5	0 5	0 5
201/203	ELECTRICAL SUBSTATION		0 5	0 5	0 5			0 5	0 5	0 5
205	TSS STORAGE BUILDING							0 5		
209	OFF GAS TEST OVEN							0 5	0 5	0 5
250	GASEOUS OXYGEN HI FLOW TEST FAC.								0 5	
250 Area	ELECTRICAL SUBSTATION		0 5	0 5	0 5			0 5	0 5	0 5
250 Area	STORAGE BUILDING							0 5	0 5	0 5
250 Area	STORAGE BUILDING							0 5	0 5	0 5
250A	GASEOUS OXYGEN HIFLOW TEST BLDG.							0 5	0 5	0 5
300 Wes	ELECTRICAL SUBSTATION		0 5	0 3	0 4			0 5	0 5	0 5
300S	BUILDING 300 SUBSTATION		0 5	0 3	0 4			0 5	0 5	0 5
302	ENGINE TEST STAND		0 5		0 5				0 3	
312	BATTERY BUILDING							0 5		
316A	TREATED WATER STORAGE FACILITY		0 5					0 4		
322	BATTERY BUILDING							0 5		
323	STORAGE BUILDING							0 5	0 5	0 5
327	OXIDIZER READY STORAGE UNIT			0 5						4 0
343A	ELECTRICAL UNIT SUBSTATION		0 5	0 5	0 5			0 5		
353F	NITROGEN TETROXIDE BURNER			0 5				0 3		
356AG	NITROGEN TETROXIDE BURNER			0 5						
360	STORAGE TANK-GROUND LEVEL		0 5	0 5				0 5		
401	ENGINE TEST STAND		0 5	0 4	0 5				0 3	
403	ENGINE TEST STAND		0 5	0 4	0 5				0 3	4 0
413	SPECIAL PROJECTS BLDG.								0 5	0 5
430	INSTRUMENTATION LINES LEM		0 3	0 3	0 3	0 3		0 4	0 3	0 5
431	STEAM GENERATOR SWITCH GEAR BLD							0 5	0 5	0 5

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC.	Plumbing.	Convey	Equip
431A	RL-10 SUBSTATION			0 5						
437A	BATTERY STORAGE BUILDING							0 5	0 5	0 5
440S	ELECTRICAL SUBSTATION		0 5	0 4	0 5			0 5	0 5	0 5
490	GANTRY CRANE FACILITY	2 5	0 5	0 3	0 5			0 5	0 3	0 5
491A	ALTITUDE SIMULATION SYSTEM								0 3	0 5
500 Area	ELECTRICAL SUBSTATION		0 5	0 5	0 5			0 5	0 5	0 5
500 Area	OXIDIZER STORAGE PAD		0 5	0 5	0 5				0 5	0 5
500 Area	ALCOHOL STORAGE AREA		0 5	0 5	0 5	0 5			0 5	0 5
511	HYDROGEN STORAGE CONTROL BLDG.							0 5		
521	OXIDIZER STORAGE CONTROL BLDG.									
531	CRYOGENICS STORAGE CONTROL BLD							0 5		
631	WELL HOUSE "J"							0 5		
632	BOOSTER STATION #1 BLDG.									
633A	STORAGE SHED					0 5		0 5	0 5	0 5
638A	STORAGE SHED					0 5		0 5	0 5	0 5
639B	STORAGE SHED					0 5		0 5	0 5	0 5
640C	STORAGE SHED					0 5		0 5	0 5	0 5
805	TEST MATERIALS STAGING BUILDING							0 5		
810	DECONTAMINATION STATION			0 5	0 5				0 5	0 5
814	INSTRUMENTATION LINES CSM					0 5				
818	SUBSTATION		0 5	0 5	0 5			0 5		
883	AREA WARNING SYSTEM					0 5				
T-106	SECURITY FIRING RANGE STORAGE BUI					0 5		0 5	0 5	0 5
T-161A	STORAGE BUILDING					0 5		0 5	0 5	0 5
T-165	MCDAC TRAILER 800 AREA							0 5		
T-241	GENERAL PURPOSE BUILDING					2 4		0 5		
T-251	TEST FACILITY BUILDING							0 5	0 5	
T-253	ELECTRICAL STORAGE BUILDING					0 5		0 5	0 5	0 5
T-363	STORAGE BUILDING					0 5		0 5	0 5	0 5
T634A	JANITORIAL STORAGE BUILDING							0 5	0 5	0 5
White Sands 1st TDRSS										
022	GENERATOR BUILDING							0 5		

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC.	Plumbing.	Convey	Equip
026	DATA INTERFACE FACILITY (WSGT)	5 0	4 0	5 0	5 0	4 0	4 0	5 0		
771	FUEL STORAGE TANKS (WSGT)			0 5				0 5		
T Add 4	PARKING LOT		0 5	0 5	0 5	0 5		0 5	0 5	0 5
T-20A	EQUIPMENT STORAGE					0 5		0 5	0 5	0 5
White Sands 2nd TDRSS										
006	WATER TANK (STGT)	3 5	0 5	0 4				0 5		
009	HAZARDOUS MATERIAL STORAGE BLDG.								0 5	
Palmdale, USAF Industrial Plant										
3038	LOADING DOCK & LEVELLOR	5 3		5 0						
Cape CanaverduAir Force Station										
1040A	DRUM EQUIPMENT STORAGE						5 0	0 4	0 3	
1050A	CHEMICAL WASTE BUILDING						5 0	3 0		
60629	POL SHELTER					5 3	5 0			
66257	BOILER BUILDING						5 0			
77611	HYPERGOLIC FUEL DRUM STORAGE FA			0 5	0 5	4 0				
E4-2414	GENERATOR BUILDING						5 0			
J6-2026	OFFICE BUILDING									
J7-0182	LOX FACILITY	5 3		5 0						0 3
J7-0432	REMOTE AIR INTAKE BUILDING						5 0	3 0		0 5
J8-1513	LIQUID HYDROGEN FACILITY		5 0	4 0						0 4
J8-1708	RAINSHELTER	5 3	5 3	5 0	5 0	5 0				
J8-1708J	Hazardous Waste Staging Area/Portable				5 0					
J8-1708	Hazardous Waste Staging Area/Portable				5 0	5 0				
J8-1753	REMOTE AIR INTAKE BUILDING						5 0			
J8-1768	ENVIRONMENTAL CONTROL & LIFE SUP				5 0				0 4	4 0
J8-1856	ELECTRIC EQUIP. BLDG. NO. 4 (FUEL)	5 3	5 3	4 0	5 0	5 3	5 0	0 3		5 0
J8-1906	HYPERGOL FUEL FACILITY			5 0	4 0					
J8-1959	RAINSHELTER			5 0	5 0					
K6-0696	CHILLED WATER PUMP HOUSE			5 3	0 4		5 0	5 0		
K6-0743	Hazardous Waste Staging Area/Portable		5 1	5 3	5 0					
K6-0743	Hazardous Waste Staging Area/Portable		5 1	5 3	5 0					

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC.	Plumbing.	Convey	Equip
K6-0943	HAZARDOUS WASTE STAGING AREA				5 0					
K6-0947	OZONE TREATMENT BUILDING	0 5	0 3	0 3	0 2	0 4				
K6-0947	EQUIPMENT BUILDING		5 3	5 3						
K6-0947	CONDENSER WATER TREATMENT BUILD						5 0			
K6-1446	SHOP & STORAGE BUILDING						5 0	4 0		
K6-1697	GAS/DM WATER PROCESSING PLANT			5 0		5 2				0 2
K6-2496	KENNEL				5 0		4 0	5 0		
K7-0315	LN2 STORAGE TANK					5 0		5 0		
K7-1557	GENERATOR BUILDING	10 4	4 2			3 0				
K7-1607	COMMUNICATION TOWER			4 0		5 0				
L5-1647	Pump House N10	3 5		0 4		0 5		3 5		
L7-0201	POL STORAGE	0 5	0 3	0 3	0 3	0 3		0 4		
L7-0251	AFT SKIRT TEST BUILDING	0 5	0 4	0 5	0 4	0 3		0 3	0 4	0 4
M5-1594	Hazardous Waste Staging Building						5 0	5 3		
M6-0456	Battery Storage Shed				5 0	5 0				
M6-0507	CHILLER PLANT					4 0	5 0			
M6-0553	EXHIBIT MAINTENANCE BUILDING	5 0	5 0	4 0	4 0	4 0	5 0	4 0		
M6-0895	SAND FILTER TREATMENT TANK		5 0		4 0	1 4				
M7-0457	STORAGE SHELTER	10 4				4 0	2 0	4 0		
TR1-475	TOUCHTON (BOXCAR)	5 1	4 1	3 1		4 1	5 0			
TR1-476	TOUCHTON (BOXCAR)	5 1	4 1	3 1		4 1	5 0			
TR1-477	TOUCHTON (BOXCAR)	4 2			4 2	5 0				
TR1-756	DIAMOND ENGINEERED SPACE	4 1	4 1	4 1	4 1		5 0	5 0	2 0	
Langley Research Center										
1146J	16' TRANS WT CMPLX STORAGE FAC					4 2				4 0
1146K	16' TRANS WT CMPLX AIR EXCHGE TWR		5 0			4 2				
1229B	POLYMERIC MATERIALS STORAGE	0 5	0 3	0 3	0 2	0 4		0 4		
132-90 A	TELEPHONE EQUIPMENT		5 0							
132-90 B	COMPUTER CABLES			0 5						
824-10	GAS LINES		5 0							

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC.	Plumbing.	Convey	Equip
Michoud Assembly Facility										
070	CHEMICAL WASTE SYSTEM		5 0	5 0						
075	SECURITY LIGHTING SYSTEM	3 5				0 5				
077	ELECTRICAL DISTRIBUTION SYSTEM					0 5				
097	CRYOGENIC LN2 SYSTEM		5 0	5 0						
204	FUEL STORAGE TANK (DIESEL)					5 0				
218	BULK STORAGE FOR MEK & HEPTANE				5 0			0 5		5 0
4391	COMPACTOR FACILITY				0 5			0 5	5 0	
4478	EQUIPMENT SHED				0 5			0 5		
4479	STORAGE SHED				0 5			0 5		
4490	STORAGE SHED				0 5	0 5		0 5		
4514	PROPULSION SYS.TEST STAND		0 3		0 3			1 5	1 5	
4517	LH2 STORAGE FACILITY	3 5	0 5			4 1		3 1		0 5
4518	HYD.TRANSFER CTRL.HOUSE					2 4		0 5		
4519	LOX TRANSFER CTRL.HOUSE					2 5		0 5		0 5
4520	SOLID PROPULSION TEST FACILITY				0 5	3 5			0 2	
4525	LOX TRANSFER CTRL.HOUSE					2 5		0 5		
4526	LH2 TRANSFER CTRL.HOUSE					2 5		0 5		
4527	LH2 STORAGE TANK		0 5							
4532	TEST SUPPORT BUILDING							0 5		5 0
4540	TEST FACILITY 116 (TF116)				0 5	3 5			0 5	
4548	TURBO PUMP/HIGH VOL FLOW FACILITY				0 5	3 5		0 5	4 1	0 5
4573	GANTRY CRANE	2 5	0 5	2 4	0 5	2 5		0 5	3 5	0 5
4574	OBSERVATION BUNKER	3 5	0 5		3 5	3 5		0 5		
4587	VACUUM PUMP STATION			4 1		3 5		0 5		
4594	FUEL STORAGE FACILITY			3 1	0 5			3 5		3 0
4597	FUEL READY STORAGE		0 5							
4598	NITROGEN GAS STORAGE FAC.		0 5		0 5					
4604	SSETS STORAGE FACILITY							0 5		
4613	AIR CONDITIONING EQUIP.BLDG.									
4616	STORAGE BUILDING		2 4	3 5				0 5		
4624	STORAGE BUILDING									

Facility	Facility Description	Structure	Roof	Exterior	Interior Finishes	Electric	HVAC.	Plumbing.	Convey	Equip
4626	LH2 COLD FLOW FACILITY				5 0					5 0
4632	GASOLINE STORAGE TANK		0 5							
4633	GASOLINE STORAGE TANK		0 5							
4635	CHEMICAL WASTE STORAGE				0 5					
4641	CENTER ACTIVITIES BLDG.							0 5		
4651	STORAGE BUILDING	3 5	3 5	3 5	3 5	3 5		0 5		
4657	LH2 VAPORIZATION FACILITY					3 5			0 5	
4658	BLOWER BUILDING							0 5	0 5	5 0
4668	WATER RESERVOIR		5 0	5 0	4 0					
4669	WATER RESERVOIR		5 0	5 0	4 0					
4672	WEST TEST AREA LH2 STORAGE FACILIT									
4673	FUEL TANKS					0 5				5 0
4680	TEST SUPPORT BUILDING					0 5		0 5		
4682	PORTABLE STORAGE BUILDING			3 5		3 5		0 5		
4688	STORAGE BUILDING					3 5		0 5		
4693	FUEL STORAGE	0 5	0 5	0 5		0 5		0 5		
4694	STORAGE BUILDING							0 5		
4696	HYDROGEN ENGINE TEST FACILITY (5%		0 5		2 5			0 5	0 5	0 5
4698	CABLE STORAGE SHED				0 5	0 5		0 5		
4699	CRYOGENIC STRUCTURAL TEST FACILIT								0 5	
4700	DEIONIZED WATER FACILITY									5 0
4734	VACUUM PUMP HOUSE				0 5					0 5
4735	AIR DRYER HOUSE					3 5		3 5		3 5
4736	DRY AIR STORAGE TANK					0 5		0 5		
4737	DRY AIR STORAGE TANK					0 5		0 5		
4745	SANDBLAST FACILITY							0 5	0 5	
4748	SHOWER & DRESSING ROOM									
4750	BARBEQUE FACILITY				0 5					
4751	HIGH PRESSURE AIR STORAGE		0 5		0 5					0 5
4756	STORAGE BUILDING	0 5	0 5	0 5	0 5	0 5		0 5		
4758	STORAGE BUILDING				0 5	0 5		0 5		
8010	SHOP				0 5			0 5		

APPENDIX H. SITE COORDINATION SHEET WITH SITES VISITED AND POCS

SITE	DATE	SITE COORDINATOR	TEAM	POC
Ames Research Center	16-20 June	Desi Dundics	Desi Dundics Wayne Powell Kent Kester Keith Burnikell	Sal Navarro (650) 604-6978 sal.navarro@arc.nasa.gov Knowlen Knowles (650) 640-0279 KnowlenKnowles@nasa.gov
Moffett Field	16-20 June	Desi Dundics	Desi Dundics Les Dundics Troy Broussard	Sal Navarro (650) 604-6978 sal.navarro@arc.nasa.gov Knowlen Knowles (650) 640-0279 KnowlenKnowles@nasa.gov
Camp Parks	16-20 June	Desi Dundics	Desi Dundics Les Dundics Paul Benthin	Sal Navarro (650) 604-6978 sal.navarro@arc.nasa.gov Knowlen Knowles (650) 640-0279 KnowlenKnowles@nasa.gov
Crows Landing	16-20 June	Desi Dundics	Desi Wayne Powell Kent Kester Keith Burnikell	Sal Navarro (650) 604-6978 sal.navarro@arc.nasa.gov Knowlen Knowles (650) 640-0279 KnowlenKnowles@nasa.gov
Dryden Flight Research Center	8-10 July	Desi Dundics	Desi Dundics Les Dundics	Gregory Spenser (661)276-2287 greg.spencer@dfrc.nasa.gov Jennifer E. Terrelonge (661) 276-5977 Jennifer.E.Terrelonge@nasa.gov
Glenn Research Center	21-25 July	Albert Ruiz	Albert Ruiz Desi Dundics Les Dundics Brian Chopp Carrie Seringer	Joe Torri (216) 433-5454 joseph.f.torri@grc.nasa.gov Rick Danks Richard.A.Danks@nasa.gov Jim Simak (216) 433-3124 j.simak@grc.nasa.gov

Plumbrook Station	28-30 July	Desi Dundics	Desi Dundics Les Dundics	Bob Puzak (419) 621-3204 Robert.M.Puzak@grc.nasa.gov Joe Torri (216) 433-5454 joseph.f.torri@grc.nasa.gov Jim Simak (216) 433-5448 j.simak@grc.nasa.gov
Goddard Space Flight Center	4-7 August	Albert Ruiz	Albert Ruiz Don Sapp Patrick J. Murray Dan Geldermann Brian Chopp	Steve Sansbury (LB&B) (301) 286-7834 ssansbur@pap200.gsfc.nasa.gov Bob Rautenberg (301)286-1138 Bob.Rautenberg@gsfc.nasa.gov Stacey Lewter (301) 286-6912 Stacey.L.Lewter@nasa.gov
Wallops Flight Facility	9-12 July	Albert Ruiz	Albert Ruiz Brian Chopp Matt Gorham Dan Gelderman	Allie Kellam (757) 824-1438 allie.j.kellam.1@gsfc.nasa.gov Gloria Sullivan (757) 824-1231 Gloria.J.Sullivan.1@gsfc.nasa.gov
National Balloon Facility at Palestine, Texas		Wayne Powell	Wayne Powell	Danny Ball 903-723-8026 dball@master.nsbf.nasa.govd
Poker Flats (Fairbanks, Alaska)	22-24 June	Desi Dundics	Desi Dundics Les Dundics	Greg Walker Gregory.Walker@gi.alaska.edu Ray Martinez martinez@gi.alaska.edu Jackie Dashiell (907) 474-7663 Jackie@gi.alaska.edu
Hawaii STDN site	2-3 June	Brian Chopp	Brian Chopp	Bill Wildes (GSFC) (301)614-5967 Clyde Cox (808) 335-6495 Clyde.Cox@honeywell-tsi.com

Ponce De Leon STDN Site including the Shiloh Facility (Located at KSC)	2 June- 30 July	Blain Nelson	Blain (2)	Jim King (321)861-2210 James.R.King@nasa.gov
Jet Propulsion Laboratory	30 June-3 July	Desi Dundics	Desi Dundics Les Dundics Albert Ruiz Troy Broussard	Vaji Nasoordeen araham.v.Nasoordeen@jpl.nasa.gov (818) 354-4922 James Black (818) 354-1961 James.E.Black@jpl.nasa.gov
Table Mountain	"	"	Desi Dundics	Pam Glatfelter glatfelter@tmf.jpl.nasa.gov (760) 249-3650 x 6723
Deep Space Network				Dennis Buck (818) 354-2292 Robert.d.buck@jpl.nasa.gov
Goldstone, California	15-18 July	Desi Dundics	Desi Dundics Les Dundics	Dennis Buck (818) 354-2292 Robert.d.buck@jpl.nasa.gov Anthony Duran (760) 255-8243 anthony.duran@csoconline.com Leroy Abeyta (760) 255-8243 Pedro.Abeyta@jpl.nasa.gov
Canberra, Australia	28-29 May	Brian Chopp	Brian Chopp	Bruce Wiley (61 2) 6201-7800. Bruce.Wiley@jpl.nasa.gov Peter Churchill Peter.Churchill@jpl.nasa.gov Dave True 61 (0) 2 62017903) dtrue@anbe.cdscc.nasa.gov Neil Newman nasa-rep.australia@csiro.au Dennis Buck (818) 354-2292 Robert.d.buck@jpl.nasa.gov
Madrid, Spain	7-10 July	Albert Ruiz	Albert Ruiz	Dennis Buck (818) 354-2292 Robert.d.buck@jpl.nasa.gov

				Cindy Jeffries (DSN Liaison) (818) 354-0076 Cynthia.E.Jeffries@jpl.nasa.gov Mr. Gregorio Pasero Site Director GRPasero@lrid.mdscc.nasa.gov Angel Martin Site Facilities Director AMartin@lrid.mdscc.nasa.gov
Johnson Space Center	21-24 July		Kent Kester Troy Broussard Keith Burnikell Troy Strasters	Mike Scott 281-483-2925 michael.j.scott1@jsc.nasa.gov BAILEY, RONALD C. (JSC-JA) (NASA) ronald.c.bailey@nasa.gov
Ellington Field	"	"	"	"
Sonny Carter Training Facility	"	"	"	"
White Sands Test Facility	23-27 June	Wayne Powell	Wayne Powell Kent Kester	John Villegas (505-524-5189) jvillega@wstf.nasa.gov
TDRSS ground stations (2)	"	"	"	John Villegas (505-524-5189) jvillega@wstf.nasa.gov
Space Harbor alternate shuttle landing site	"			"
Palmdale	11 July	Desi Dundics	Desi Dundix Les Dundics	Tom Franklin (Boeing) (661) 272-4053 (661) 400-5967 (cell)
Kennedy Space Center	2 June- 31 July	Blain Nelson	Troy Strasters Carrie Seringer Mary Chambers Kyle Kendall Tiffany Martin Matt McQuinn Jim Miles Mario Peralta David Ratliff Chris Ruggeri Chrissy Holtman	Jim King (321)861-2210 James.R.King@nasa.gov
KSC – Cape Canaveral Air Force Station facilities	"	"	"	"
Merritt Island STDN Station	"	"	Blain (2)	"
Morocco/Gambia alternate shuttle landing site		Not to be visited		Dean Schaaf (321) 861-9311 (661) 276-3409 dean.schaaf-1@ksc.nasa.gov

Langley Research Center	2 23-27 June	Albert Ruiz	Albert Ruiz Dan Geldermann Brian Chopp Aaron Anderson	Bert Sawyer (757)864-8563 m.h.sawyer@larc.nasa.gov Brad Balls (757) 864-7297 Angie Brown (757) 864-6857 a.brown@larc.nasa.gov Al Mignogna (757) 864-4930 a.m.mignogna@larc.nasa.gov
Marshall Space Flight Center (data from prior task)	14-18 July	Blain Nelson	Blain Nelson Mary Chambers James Miles Shad Wilson	Kevin Primm (256) 544-6827 Kevin.Primm@msfc.nasa.gov Tim Corn (256) 544-9451 Tim.Corn@nasa.gov
Michoud Assembly Facility	30 June-3 July	Blain Nelson	Blain Nelson Aaron Anderson Wayne Powell	Ernie Graham (504) 257-2619 Ernest.Graham@MAF.nasa.com Steve Brettle (504) 257-2601
Santa Susana Field Laboratory	14-17 July	Desi Dundics	Desi Dundics Les Dundics	Jim Pelger (818) 586-1429 James.R.Pelger@boeing.com Peter (Mike) Daley (818) 586-9052 peter.m.daley@boeing.com Steve Sitlington (818) 586-2928 steve.c.sitlington@boeing.com
Alliant Techsystems (ATK) (Brigham City UT)	25 June	"	Desi Dundics	Cordell Christianson (435) 863-4461 (435) 279-6119 (C) Cordell.Christianson@atk.com Paul Peterson (435) 863-6916 Paul.Peterson@atk.com
Stennis Space Center	16-21 June	Carrie Seringer	Carrie Seringer Bob Rauch Mario Peralta	Bob Heitzmann (228) 688-2210 Robert.heitzmann@ssc.nasa.gov

Stennis Tenant facilities	"	"	"	"

APPENDIX I. DATABASE QUERY AND TABLE EXPLANATIONS

Object Type	Object Name	Query Effect	Object Purpose
Query	Calc A01 Assessment 1	Update	Update the Structural System Percentage in Assessment table to account for systems with rating of zero.
Query	Calc A02 Assessment 2	Update	Calculate and update facility FCI and DM in Assessment table.
Query	Calc A03 SummaryCat 1	Update	Calculate and update CRV Total, DM Total and FacCount in SummaryCat table.
Query	Calc A04 SummaryCat 2	Update	Calculate and update FCI in SummaryCat table.
Query	Calc A05 SummaryHrchy 1	Update	Calculate and update CRV Total, DM Total, ActiveCRV, ActiveDM, InactiveCRV, InactiveDM in SummaryHrchy table.
Query	Calc A06 SummaryHrchy 2	Update	Calculate and update FCI, ActiveFCI, InactiveFCI in SummaryHrchy table.
Query	Calc A07 SummaryHrchy 3	Update	Calculate and update StrucCRV, RoofCRV, ExtCRV, IntfCRV, ElecCRV, HvacCRV, PlumbCRV, ConvCRV, EquipCRV in SummaryHrchy table.
Query	Calc A08 SummaryHrchy 4	Update	Calculate and update StrucSCI, RoofSCI, ExtSCI, IntfSCI, ElecSCI, HvacSCI, PlumbSCI, ConvSCI, EquipSCI in SummaryHrchy table.
Query	Calc A09 SummaryHrchy 5	Update	Calculate and update StrucDM, RoofDM, ExtDM, IntfDM, ElecDM, HvacDM, PlumbDM, ConvDM, EquipDM in SummaryHrchy table.
Query	Calc A10 SummaryHrchy 6	Update	Calculate and update CRV Total, DM Total, ActiveCRV, ActiveDM, InactiveCRV, InactiveDM, StrucCRV, RoofCRV, ExtCRV, IntfCRV, ElecCRV, HvacCRV, PlumbCRV, ConvCRV, EquipCRV in SummaryHrchy table for the NASA Total row.
Query	Calc A11 SummaryHrchy 7	Update	Calculate and update FCI, ActiveFCI, InactiveFCI, StrucSCI, RoofSCI, ExtSCI, IntfSCI, ElecSCI, HvacSCI, PlumbSCI, ConvSCI, EquipSCI in SummaryHrchy table for the NASA Total row.
Query	Calc A12 SummaryHrchy 8	Update	Calculate and update StrucDM, RoofDM, ExtDM, IntfDM, ElecDM, HvacDM, PlumbDM, ConvDM, EquipDM in SummaryHrchy table for the NASA Total row.
Query	Calc Axx Join 1	View	Provide a Join between Perc_CRV_Sys and Assessment tables for calculating DM values in the SummaryHrchy table.
Query	Calc B01 SummaryCat Analysis 1	Update	Calculate and update CRV Total, DM Total, FacCount in SummaryCat table.
Query	Calc B02 SummaryCat Analysis 2	Update	Calculate and update FCI in SummaryCat table.
Query	Calc C01 SummaryCat Delta	Update	Calculate and update DeltaCRV, CompFY FCI, CurrFY FCI, Delta FCI, CompFY DM, CurrFY DM, DeltaDM, Delta% in SummaryCat Delta table.
Query	Calc Cxx Join 1	View	Provide a Join for the Compare FY DM values from the SummaryCat table for the SummaryCat Delta table calculations.

Object Type	Object Name	Query Effect	Object Purpose
Query	Calc Cxx Join 2	View	Provide a Join for the Current FY DM values from the SummaryCat table for the SummaryCat Delta table calculations.
Query	Calc D01 SummaryHrchy Delta	Update	Calculate and update CompFY DM, CurrFY Dm, DeltaDM, Delta%, CompFY FCI, CurrFY FCI, DeltaFCI, StrucDM%Delta, RoofDM%Delta, ExtDM%Delta, IntfDM%Delta, ElecDM%Delta, HvacDM%Delta, PlumbDM%Delta, ConvDM%Delta, EquipDM%Delta, StrucSCIDelta, RoofSCIDelta, ExtS
Query	Calc Dxx Join 1	View	Provide a Join for the Compare FY DM values from the SummaryHrchy table for the SummaryHrchy Delta table calculations.
Query	Calc Dxx Join 2	View	Provide a Join for the Current FY DM values from the SummaryHrchy table for the SummaryHrchy Delta table calculations.
Query	Calc E01 SummaryOpsFac 1	Update	Calculate and update CRV Total, FCI, DM Total, FacCount in the SummaryOpsFac table.
Query	Calc E02 SummaryOpsFac 2	Update	Calculate and update CRV Total, FCI, DM Total, FacCount in the SummaryOpsFac table for the Operations Facilities Total line.
Query	Calc E03 SummaryRnDFac 1	Update	Calculate and update CRV Total, FCI, DM Total, FacCount in the SummaryRnDFac table.
Query	Calc E04 SummaryRnDFac 2	Update	Calculate and update CRV Total, FCI, DM Total, FacCount in the SummaryRnDFac table for the R&D Facilities Total line.
Query	Calc F01 SummaryPgms 1	Update	Calculate and update CRV Total, DM Total, ActiveCRV, ActiveDM, InactiveCRV, InactiveDM in SummaryPgms table.
Query	Calc F02 SummaryHrchy 2	Update	Calculate and update FCI, ActiveFCI, InactiveFCI in SummaryPgms table.
Query	Calc F03 SummaryHrchy 3	Update	Calculate and update StrucCRV, RoofCRV, ExtCRV, IntfCRV, ElecCRV, HvacCRV, PlumbCRV, ConvCRV, EquipCRV in SummaryPgms table.
Query	Calc F04 SummaryHrchy 4	Update	Calculate and update StrucSCI, RoofSCI, ExtSCI, IntfSCI, ElecSCI, HvacSCI, PlumbSCI, ConvSCI, EquipSCI in SummaryPgms table.
Query	Calc F05 SummaryHrchy 5	Update	Calculate and update StrucDM, RoofDM, ExtDM, IntfDM, ElecDM, HvacDM, PlumbDM, ConvDM, EquipDM in SummaryPgms table.
Query	Calc Fxx Join 1	View	Provide a Join between Perc_CRV_Sys and Assessment tables for calculating DM values in the SummaryPgms table.
Query	Flat File View	View	Provide a Join between Facilities and Assessment tables to show assessment data.
Query	FYCompare	View	Provide a Join between Assessment and FY tables to show the Compare FY assessment ratings.
Query	FYComparison	View	Provide a Join between Facilities table and FYCompare and FYCurrent queries to allow comparison of Compare and Current FY assessment ratings side by side.

Object Type	Object Name	Query Effect	Object Purpose
Query	FYCurrent	View	Provide a Join between Assessment and FY tables to show the Current FY assessment ratings.
Query	FYDeltaScreen	View	Provide a Join between Facilities table and FYCompare and FYCurrent queries to allow screen records by the absolute difference between Compare and Current FY assessment ratings.
Query	RPI Issues Count	View	Provide a View to count the RPI Issues by Issue type.
Query	RPI Issues View	View	Provide a View of RPI Issues by Facility.
Table	Assessment	NA	Contains facility RPI data and assessment ratings by FY.
Table	BMARData	NA	Contains BMAR data by FY and hierarchy.
Table	DM_Categories	NA	Contains DM Categories and the associated descriptions.
Table	Documentation Fields	NA	Contains documentation on fields in the DM Database tables.
Table	Documentation Objects	NA	Contains documentation on queries and tables in the DM Database.
Table	End_Codes	NA	Contains codes and associated description for indicating why a rating assessments are ceased on a particular facility.
Table	Facilities	NA	Contains facility RPI data and associated hierarchical and description data.
Table	FY	NA	Contains records to indicate fiscal years that have a DM assessment and various flags pertaining to those fiscal years.
Table	FYConstants	NA	Contains constants used in DM calculations by fiscal year of DM assessment.
Table	Hierarchy	NA	Contains hierarchy data for NASA RPI.
Table	NASA_Class	NA	Contains mapping of NASA Class code to DM Category code.
Table	Perc_CRV_Cond	NA	Contains percent to assessement condition mapping for the nine assessment systems.
Table	Perc_CRV_Sys	NA	Contains percent to assessment system mapping for the DM Categories.
Table	Programs	NA	Contains information on Program use for facilities.
Table	RPI_Codes	NA	Contains codes and associated description for indicating issues or problems in the RPI data for facilities.
Table	RPI_Issues	NA	Contains RPI Issues codes mapped to individual facilities.
Table	SummaryCat	NA	Contains summarized or totaled DM calculations by DM Categories.
Table	SummaryCat Analysis	NA	Contains summarized or totaled DM calculations for a specific DM Category between two assessment years.
Table	SummaryCat Delta	NA	Contains comparison between two assessment years of summarized or totaled DM calculations by DM Categories.
Table	SummaryHrchy	NA	Contains summarized or totaled DM calculations by RPI Hierarchy.

Object Type	Object Name	Query Effect	Object Purpose
Table	SummaryHrchy Delta	NA	Contains comparison between two assessment years of summarized or totaled DM calculations by RPI Hierarchy.
Table	SummaryOpsFac	NA	Contains summarized or totaled DM calculations for a subset of DM Categories representing Operations Facilities.
Table	SummaryPgms	NA	Contains summarized or totaled DM calculations by NASA Program.
Table	SummaryRnDFac	NA	Contains summarized or totaled DM calculations for a subset of DM Categories representing Research and Development Facilities.

APPENDIX J. NASA WHITE PAPER ON THE DEFERRED MAINTENANCE ESTIMATION METHOD

Deferred Maintenance/Condition Assessment Discussion Paper
Also known as Backlog of Maintenance and Repair (BMAR)

By Charles B. Pittinger, Jr., P.E.
Facilities Engineering Division
National Aeronautics & Space Administration HQs
4/8/1999
(Revised 8/18/1999)

Definition:

Deferred Maintenance – is maintenance that was not performed when it should have been or was scheduled to be and which, therefore, is put off or delayed for a future period. (Federal Accounting Standards Advisory Board (FASAB), Statement of Recommended Accounting Standards Number 6, September 1995)

Deferred maintenance DOES NOT include alterations and modifications, expansion in size or capability, work to address major technical or functional obsolescence, or other types of "new work."

Unique to the Public Sector:

Generally, recognized leading companies in the private sector find "deferred maintenance" to be a foreign term or concept. In companies like 3M and Du Pont, facilities are well maintained and kept in an excellent state of repair as long as product lines are profitable and the rate of return on facilities investments are reasonable. If a facility is planned to be shut down, then resources may intentionally be withheld.

In the public sector, life-cycle cost, rate of return on investment, and cost-avoidances are not normally the most significant determining factors in facilities investment decisions. As budgets are tightened, the first thought is to protect "mission" as much as possible, and facilities investments are frequently deferred. Most maintenance actions can be deferred without immediate failure or observable deterioration by the uninitiated. But repetitive deferrals of many maintenance actions over time take a significant toll in the originally expected useful lifetime of facilities and equipment. A frequent refrain heard by facilities personnel during budget times are "Can you make it last for another year?" The answer is almost always "Yes."

Uses:

Deferred maintenance (or BMAR) has been used at least for decades by the Department of Defense, other agencies, Congress, and other governmental units. It has been used to indicate the degree of facilities work that has been deferred for budgetary reasons and that is required to restore the facilities to good usable condition that they were originally intended for. The degree of deferred maintenance is also an indicator of the quality of the stewardship of public assets

provided by the using agencies. When tracked and trended over time with other basic facilities performance metrics such as the Annual Cost of Maintenance and Repair, and Facility Reliability and/or Facility Availability, the effectiveness of a maintenance and repair program can be evaluated. Additionally, FASAB has recently seized upon deferred maintenance as a tool to reflect the degree of unfunded liability due to agency underfunding of facilities maintenance and repair in their annual Chief Financial Officer's reports.

Problem Statement:

In concept, the determination and use of deferred maintenance data is straightforward and simple. In execution, it is complex, time consuming, very expensive to gather, always out of date, and rarely complete. Since determining deferred maintenance is generally an unfunded requirement, along with many others typically, minimum attention and resources are directed towards it (i.e., resources invested in it typically do not generate any return in funds). A case in point, is the attention that Congress directed to deferred maintenance in the Department of Defense in the 1980's. Significant funding was spent on facilities and infrastructure over most of a decade. Shortly thereafter, Congress inquired as to the level of deferred maintenance in DOD – rather than decline from the investment, it grew significantly. As a result of funding being made available for deferred maintenance, local investments were made to identify MORE deferred maintenance. In other words, the full extent of deferred maintenance had never been identified previously due to the time and costs involved in the traditional processes used to determine it. Congress has paid additional interest in deferred maintenance in the years following at DOD and in other agencies, but the root-cause problem still exists today.

Traditional Method of Determining Deferred Maintenance:

Most past efforts to identify deferred maintenance have relied on traditional engineering methods. First, individual facilities were inspected by a team of skilled craftsmen and/or engineering consultants to identify and document individual deficiencies in facilities and equipment, systems, and structure (Condition Assessment). Second, these deficiencies are then entered into some sort of database or spreadsheet. Third, industry or custom estimating guides are used to calculate the repair cost for each individual deficiency. Fourth, the repair costs are sorted and organized is some fashion and then summed. Additionally, this database then needs to be updated regularly to reflect additional deferred maintenance, deferred maintenance completed by repair actions, and adjusted for inflation from time to time.

Although simple in concept, this process can easily involve MILLIONS of inspections and calculations for an agency of any size, and is cost-prohibitive. The data is also subject to rapid aging.

The Need:

Federal agencies have a need for a simplified system of documenting deferred maintenance. It must be a "breakthrough" method based on creative thinking. The system must be minimally resource intensive. It must be brief (as compared to past practices), and it must be auditable to support the agencies' Chief Financial Officers annual reports.

Ideally, if a group of agencies were to settle on a streamlined approach to determining deferred maintenance and document the method to be used, a defacto standard would then exist. Then groups such as the General Accounting Office, and private sector accounting firms would use the document as a reference and a measure of standard of practice.

NASA as an Example:

NASA has a fairly reasonable estimate of deferred maintenance determined by the traditional method outlined above, and it suits the purpose for its intended use (Macro-level trending and benchmarking with other agencies and activities). But deferred maintenance has been too expensive to collect, too expensive to repeat regularly, and has never been 100% completed at all locations. It has not received a lot of attention in the past due to being an unfunded requirement. NASA uses it as a facilities metric to compare to annual funding for maintenance and repair, which are trended over time as a macro metric. Like at other agencies, the FASAB requirement has brought heightened interest in the deferred maintenance data at NASA, but no additional funds for it.

One Proposed Method:

For the purpose of initiating wide discussion and brainstorming new methods to determine deferred maintenance, the following concept is offered:

Assumptions:

1. Condition assessment performed by systems (not individual components) and by entire facility (overall system average).

2. Simple condition levels.

3. Limited number of systems to assess.

4. Parametric estimating based on Current Replacement Value (CRV).

CRV – Current Replacement Value (Capitalized Book Value inflated to present dollars)

Condition Assessment Levels:	Repair Cost:
5 New/Only normal PM required	5% of CRV
4 Some repairs needed, overall system generally functional	20% of CRV
3 Many repairs needed, limited functionality or availability	50% of CRV
2 May be functional, but obsolete or does not meet codes	100% of CRV
1 Not operational, or unsafe	100% of CRV

(Range of CRV by Condition Level subject to study)

Major Systems: (% To be adjusted for special classes of facilities**)	% of Facility CRV:
*Architectural – Doors, windows, finishes, tile, carpeting	5
*Roof – Membrane, flashings, gutters & downspouts	10
*Electrical – Electrical distribution, transformers, overcurrent, fire detection, motors, inverters, UCS/EMCS, alarms, PA systems	15
*Plumbing – Water, wastewater, fire sprinklers, HP air & gases, valves, pumps	15
*HVAC – Heating, ventilation, and air-conditioning	25
*Structural – Structure, cranes, elevators	30
	100%
Site – Fencing, walks, curbs, paving, drainage, signage	100
Utility Systems – Exterior	100

(Range of CRV by Major System subject to study)

* These systems add up to 100% of CRV in discrete facilities (inside the 5-foot line of the building)
** % distribution to have standard adjustments for antenna, launch platforms, wind tunnels, space environmental simulators, and other special use facilities.

Example for One Facility (Hypothetical):

Office and Laboratory Facility – 15 years old. Building has a new roof and excellent interior finishes. The electrical systems, plumbing systems, and structure are adequate. The air-conditioning and heating systems have been problematic since new and the occupants are unhappy with the temperatures and air changes.

CRV $4,500,000 Building

$250,000 Site Work

Exterior utility systems considered as a separate facility

Condition Assessment:

System	Level	%CRV	%Facility	
Architectural	5	(0.05)	(0.05)	0.0025
Roof	5	(0.05)	(0.10)	0.0050
Electrical	4	(0.20)	(0.15)	0.0300
Plumbing	4	(0.20)	(0.15)	0.0300
HVAC	3	(0.50)	(0.25)	0.1250
Structural	4	(0.20)	(0.30)	0.0600
				0.2525
Site	4	(0.20)	(1)	0.2000
Utility Systems – Exterior	NA	(NA)	(NA)	NA

	%	CRV
Systems	0.2525 *	$4,500,000 = $1,136,250
Site	0.2000 *	$250,000 = $50,000

$1,186,250 Deferred Maintenance

- Condition levels are simple enough that they should be repeatable by average maintenance personnel after a brief walk-through of the facility.
- Condition levels are tied to a fixed percentage of facility current replacement value.
- Facility systems values are tied to a fixed percentage of the overall facility CRV (summing to 1 or 100%).
- Deferred maintenance calculation then becomes just a simple parametric multiplication.

Final Note:

The method outlined above is not meant to be either a construction estimate or a budget estimate to carry out projects. The intended use is as a facility performance metric to be compared and trended against other commonly used facilities metrics. This parametric estimate is accurate enough for its intended purpose while utilizing a standard approach in a simplified manner that should allow full application at a tolerable cost. For the purposes of metric trending and FASAB reporting we must not fall in the typical engineering trap of making calculations to the fourth decimal place, rather than viewing this as a MACRO level indicator number.

8/18/1999 Revision:

Inventory To Perform Condition Assessment On:

To further reduce the cost of gathering deferred maintenance data, and in the spirit of the "Pareto Rule" (Securing 80% of the result for 20% of the cost, etc.), it would make sense to consider inspecting a smaller group of facilities that represent the majority of an agency's CRV and then extrapolating for the remainder of the assets. As an example at NASA, the facility inventory consists of over 6,000 facilities (Buildings and structures). From the 1997 Facilities Investment Study, 675 of NASA's most expensive facilities (CRV of $4 million and over) equate to 88% of NASA's CRV of $17 billion.

Acceptable Level of Deferred Maintenance:

It is not reasonable to reduce deferred maintenance to zero. Doing so would possibly imply to some that maintenance and repair activities are over-funded. A reasonable level of backlog at the NASA centers has been proposed to be an amount equal to the annual recurring maintenance and repair spending (Not including operations or new facility requirements). This level of backlog would allow the capital program to concentrate on renewal of the asset base while incorporating the execution of the backlog of deferred maintenance in an orderly fashion in facility renewal planning.

Proposed Redefinition of Deferred Maintenance:

Although we refer to maintenance in discussing deferred maintenance, most parties assume it also to contain **REPAIR** (Both capital and non-capital, but no alterations or new requirements, etc.). There generally is very little pure maintenance that exists in Deferred Maintenance/BMAR. You might find peeling paint as an example of deferred maintenance, but the larger work content turns into repair eventually when maintenance is deferred for a long enough period of time. As an example, if the peeling paint is deferred for a long enough time, the underlying metal building skin will corrode and perforate resulting in a repair requirement to re-skin the structure. If we changed the name to **Deferred Maintenance and Repair** - DMAR (using the same FASAB definition), there would be less confusion over the work content.

APPENDIX K: SUMMARY TABLE WITHOUT FACILITIES OVER $100M

This table shows the impact that high value facilities can have on the DM estimate and the FCI of Centers and the Agency.

Line Name	FY03 CRV Total	FY03 CRV Total (- $100M Facilities)	FY03 DM Total	DM Total (- $100M Facilities)	FCI	FCI (- $100M Facilities)	Active DM	Active DM (- $100M Facilities)	Active FCI	Active FCI (- $100M Facilities)
Ames Research Center Total	$3.55	$2.19	$0.30	*$0.15*	3.7	*3.8*	$0.14	*$0.10*	3.8	3.8
Dryden Flight Research Center Total	$0.33	$0.33	$0.01	$0.01	4.2	4.2	$0.01	$0.01	4.2	4.2
Glenn Research Center Total	$2.53	$2.09	$0.25	*$0.22*	3.5	3.5	$0.14	*$0.10*	3.7	3.7
Langley Research Center	$2.62	$1.59	$0.15	*$0.10*	3.7	3.7	$0.12	*$0.08*	3.7	3.8
Code R (Aerospace Research)	**$9.02**	**$6.19**	**$0.71**	***$0.48***	**3.7**	**3.7**	**$0.41**	***$0.29***	**3.8**	**3.8**
Goddard Space Flight Center Total	$1.83	$1.71	$0.09	$0.09	4.0	4.0	$0.06	$0.06	4.1	4.1
Code Y (Earth Science)	**$1.83**	**$1.71**	**$0.09**	**$0.09**	**4.0**	**4.0**	**$0.06**	**$0.06**	**4.1**	**4.1**
Jet Propulsion Laboratory Total	$1.27	$0.60	$0.09	$0.06	4.0	4.0	$0.05	*$0.03*	4.0	*4.1*
Code S (Astrobiology & Space Research / Science)	**$1.27**	**$1.27**	**$0.09**	**$0.09**	**4.0**	**4.0**	**$0.05**	**$0.05**	**4.0**	**4.0**
Johnson Space Center Total	$1.84	$1.62	$0.13	*$0.09*	3.3	3.3	$0.12	*$0.09*	3.3	*3.3*
Kennedy Space Center Total	$4.74	$2.36	$0.85	*$0.24*	3.3	*3.4*	$0.84	*$0.23*	3.3	3.4
Marshall Space Center Total	$2.51	$2.18	$0.21	*$0.19*	3.6	3.6	$0.18	*$0.15*	3.7	3.7
Stennis Space Center Total	$1.63	$1.07	$0.11	*$0.05*	3.4	*3.6*	$0.10	*$0.04*	3.4	*3.6*
Code M (Human Exploration & Development)	**$10.73**	**$7.24**	**$1.30**	***$0.58***	**3.4**	***3.5***	**$1.24**	***$0.52***	**3.4**	***3.5***
NASA TOTAL	**$22.84**	**$16.39**	**$2.20**	***$1.23***	**3.6**	***3.7***	**$1.77**	***$0.92***	**3.6**	***3.7***